PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:	
Frederick J. MURPHY	Group Art Unit: 2624
Serial No.: 09/877,238	Examiner: TBA
Filed: June 11, 2001	Atty. Dkt. No. 001223.00015
For: METHOD AND APPARATUS FOR INTERFACING A PLURALITY OF DEVICES TO A COMPUTER NETWORK	

SUBMISSION OF DRAWINGS

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Attached hereto for filing in the United States Patent and Trademark Office is forty-five (45) sheets (Figures 1-47) of drawings for the above-identified patent application.

It is believed that no fee is required. However, if a fee is required, please charge our Deposit Account No. 19-0733.

Respectfully Submitted,

Date: December 10, 2001

By: _____
Thomas L. Peterson
Registration No. 30,969

BANNER & WITCOFF, LTD.
1001 G Street, N.W., 11th Floor
Washington, D.C. 20001
(202) 508-9100

#4

Original Documents, Pictures, Drawings and Screen Captures

Scanned by a G3 Facsimile Machine or Optical Scanner or Screen Capture Methods (B)

Connected to The Inventions Adjunct Device or PC Card: (C)
For a Fax Machine and via Fax Modem and Circuitry that Generates Central Office Dial Tone or by Standard Auxillary Port Means-to Include USB or by Wireless Means-to include Infrared

Connected to A Packet Switched Network via Data Modem; to include Cable, Cellular and Satellite -Resident or Remote; and Standard RJ 11 Phone Line Connector or RJ 45 LAN Connector or Cable Connector or CDMA/TDMA Cellular Connection or Satellite Up Link/ Down Link Connection (D)

Receive Images Generated by the Fax Machine or Optical Scanner or Screen Capture Method (E)

Store Images in Memory Buffer(s) (F)

Invoke Hardware and Software process to Remove Inferior CODEC's or OCR scan codes Restoring images to Native Scanned Image State (G)

Store Native Image Data In Memory Buffer(s) (H)

Compress Native Image Data with Multi Dimensional CODEC's Resident in Eproms and ASIC. Specific CODEC's to include but are not limited to: LZW-TIFF & TIFF-FX, JPEG & JPEG, 2000, MPG, Streaming Media, Harmonic Matrix Multiplication. (I)

Store in Memory Buffer(s) (J)

Obtain Unique Electronic e-mail or IP Destination Address and public or secret encryption key for Intended Recipient from address table and key ting resident in flash memory or remotely from a data base and remote key server (K)

Associate Phone Number Dialed By The Fax Machine or Other Remote Device with the e-mail or IP destination address or if null Confirm destination address via device per (K) or PC keyboard

Store in Memory Buffer(s) (N)

If encryption is selected by user or by default, encrypt stored buffer of newly compressed Image data with encryption algorithm(s) stored in EPROM and/or resident in ASIC to include but not limited to
S-MIME, S_HTTP, SXML, SET, Rijndael, PGP, DES Vernam ciphers and RSA. Additionally the multi dimesional codecs of the harmonic matrix muliplication compression schemes available in this invention can be adapted to perform non-recoverable-disappearing key encryption. (O)

Store in Memory Buffer(s) (P)

Invoke message encapsulation protocols stored in EPROM(s), to include but not limited to IP, TCP, UDP ,SMTP, POP3, MIME & extended MIME message types, IMAP, HTML and XML and encapsulate entire previous memory buffer(s) within appropriate protocol stacks. (Q)

Store in Memory Buffer(s) (R)

Obtain users device, terrestrial location coordinates and/or biometrics from the device hardware and software. Hash the information to create a reflective non original information data map. (S)

Store hashed information in Memory Buffer(s) (T)

Generate message headers in accordance with selected protocols and may include non-standard x headers to identify specific transport, identity and receipt verification processes and other routing and sending reception requirements. (U)

Send entire now completed processed contents of the previous buffer(s) to intended recipient utilizing appropriate protocols over any terrestrial or satellite communication network. Retain entire contents of memory buffer(s) and message headers for a specified period of time. Entire or partial memory buffer(s) contents may be permantly archived, on premise or remotely, utilizing standard achieving media and processes. (U)

The reception process is the direct inverse of the sending process above for a stand alone G3 facsimile machine and in the reception mode (A) above may include direct printers/plotters or any other message media rendering equipment, for example 3 dimensional mold making machines.

Figure 1

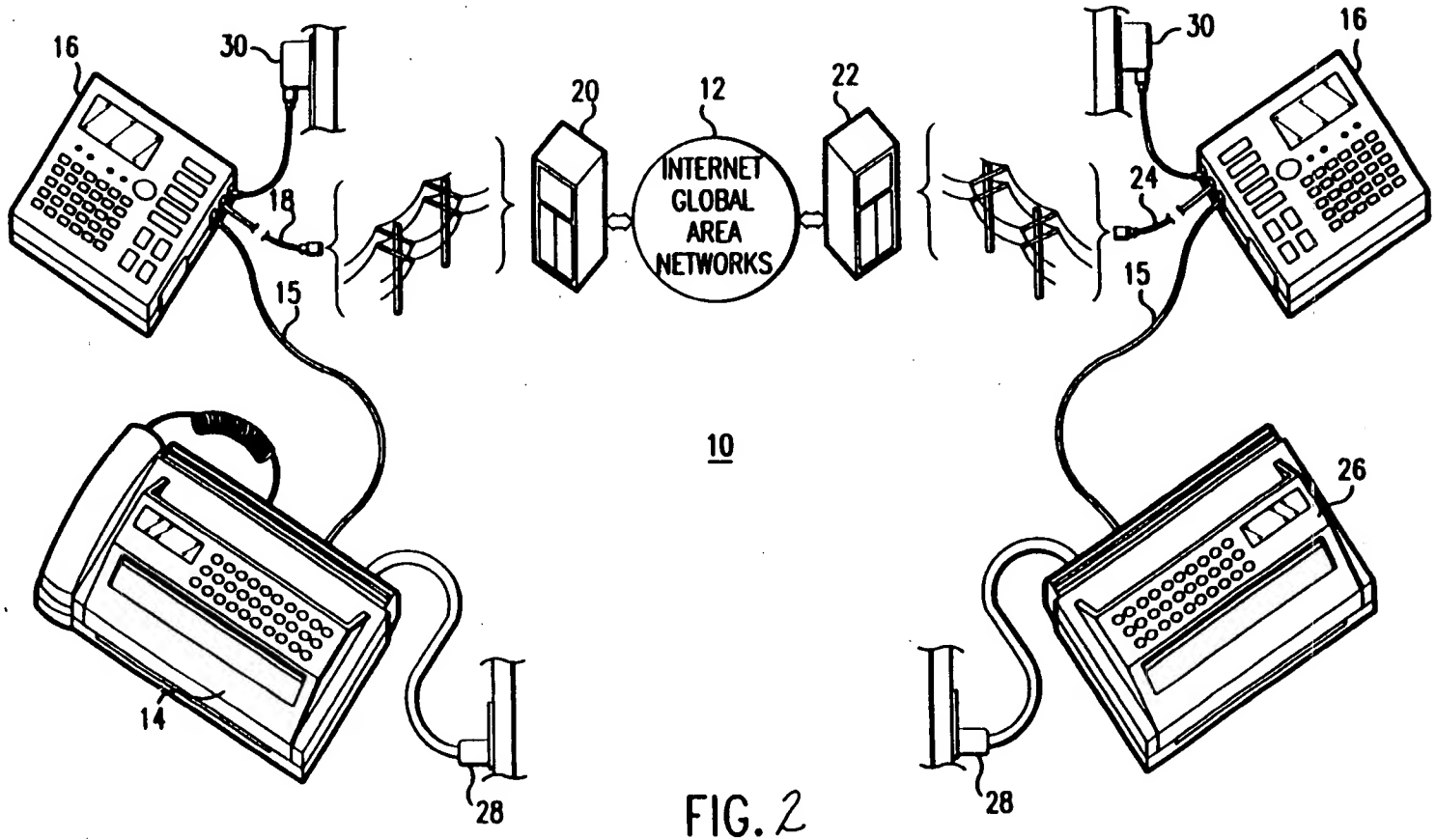


FIG. 2

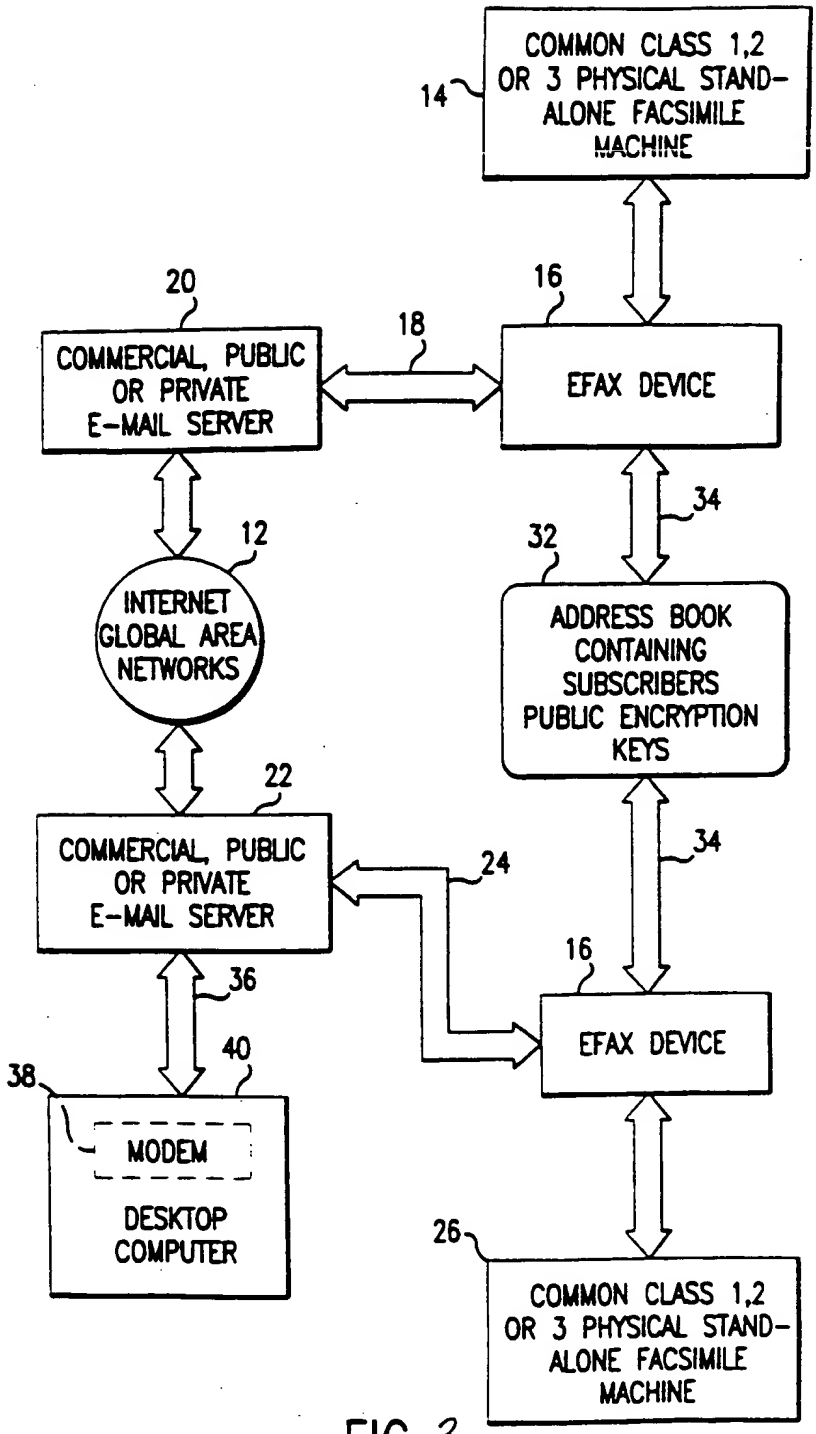

COMMON CLASS 1,2 OR 3 PHYSICAL STAND-ALONE FACSIMILE MACHINE
14
16
20
18
COMMERCIAL, PUBLIC OR PRIVATE E-MAIL SERVER
EFAX DEVICE
34
12
32
INTERNET GLOBAL AREA NETWORKS
ADDRESS BOOK CONTAINING SUBSCRIBERS PUBLIC ENCRYPTION KEYS
22
34
COMMERCIAL, PUBLIC OR PRIVATE E-MAIL SERVER
24
16
36
EFAX DEVICE
40
38
MODEM
DESKTOP COMPUTER
26
COMMON CLASS 1,2 OR 3 PHYSICAL STAND-ALONE FACSIMILE MACHINE

FIG. 3

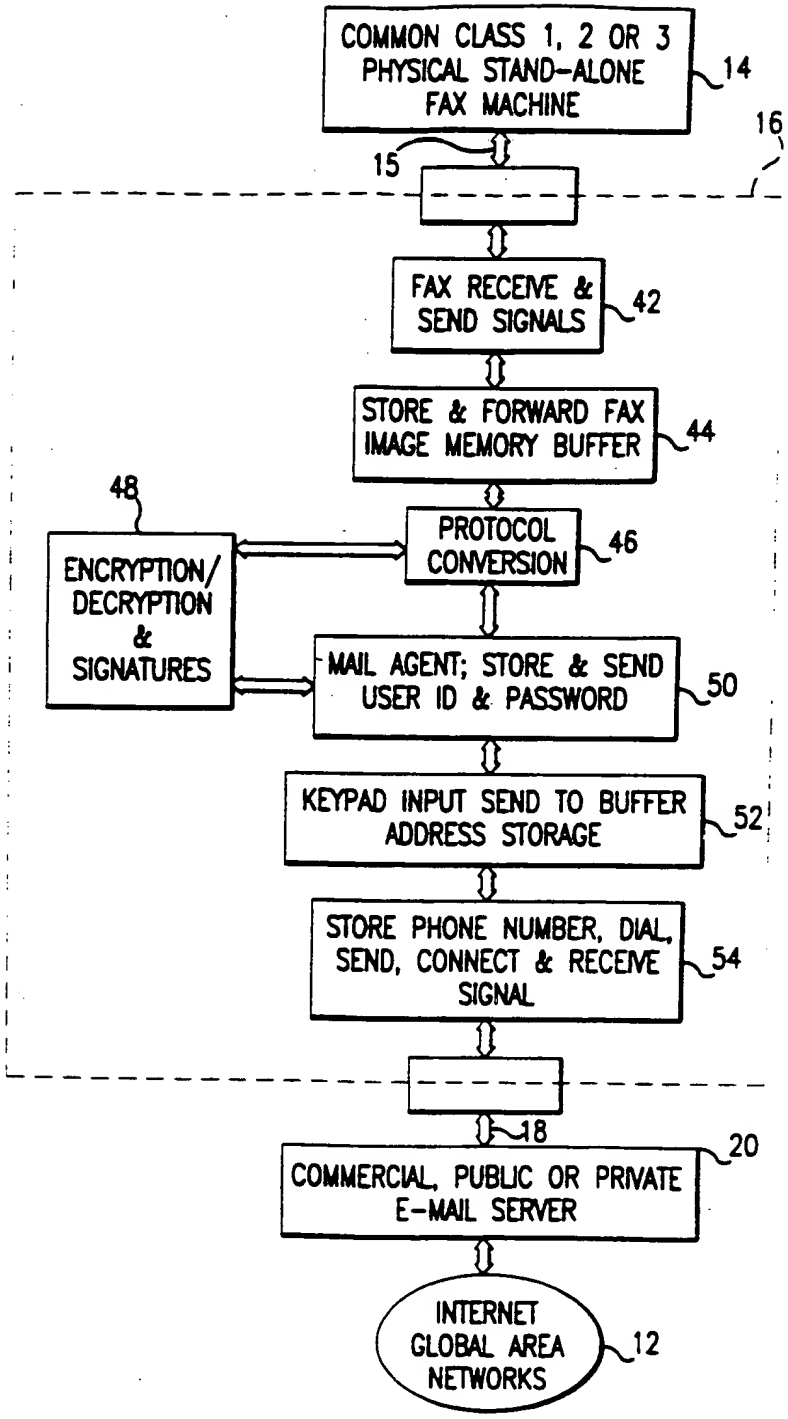

COMMON CLASS 1, 2 OR 3 PHYSICAL STAND-ALONE FAX MACHINE
14
16
15
FAX RECEIVE & SEND SIGNALS
42
STORE & FORWARD FAX IMAGE MEMORY BUFFER
44
48
ENCRYPTION/ DECRYPTION & SIGNATURES
PROTOCOL CONVERSION
46
MAIL AGENT; STORE & SEND USER ID & PASSWORD
50
KEYPAD INPUT SEND TO BUFFER ADDRESS STORAGE
52
STORE PHONE NUMBER, DIAL, SEND, CONNECT & RECEIVE SIGNAL
54
18
20
COMMERCIAL, PUBLIC OR PRIVATE E-MAIL SERVER
INTERNET GLOBAL AREA NETWORKS
12

FIG. 4

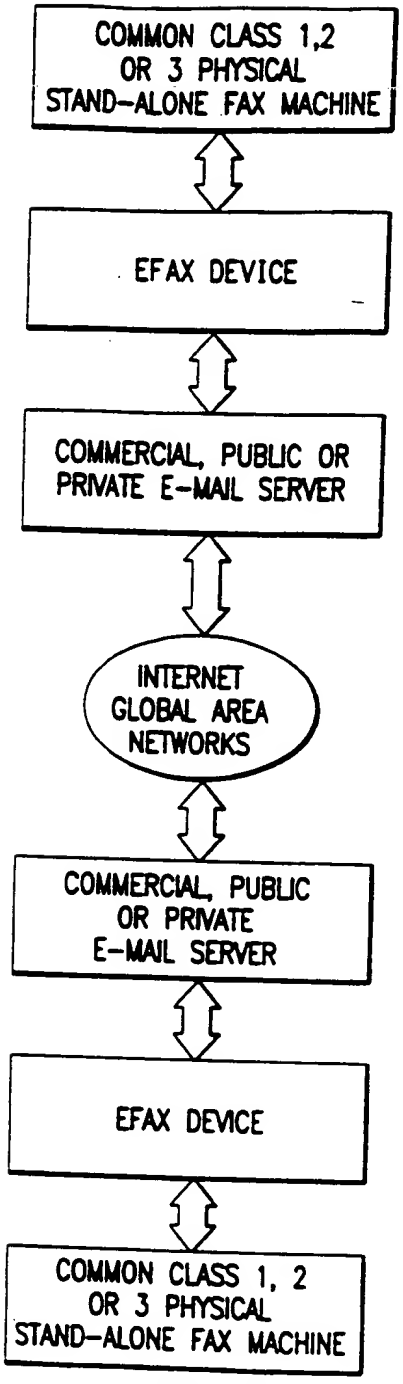

COMMON CLASS 1,2 OR 3 PHYSICAL STAND-ALONE FAX MACHINE
EFAX DEVICE
COMMERCIAL, PUBLIC OR PRIVATE E-MAIL SERVER
INTERNET GLOBAL AREA NETWORKS
COMMERCIAL, PUBLIC OR PRIVATE E-MAIL SERVER
EFAX DEVICE
COMMON CLASS 1, 2 OR 3 PHYSICAL STAND-ALONE FAX MACHINE

FIG. 5

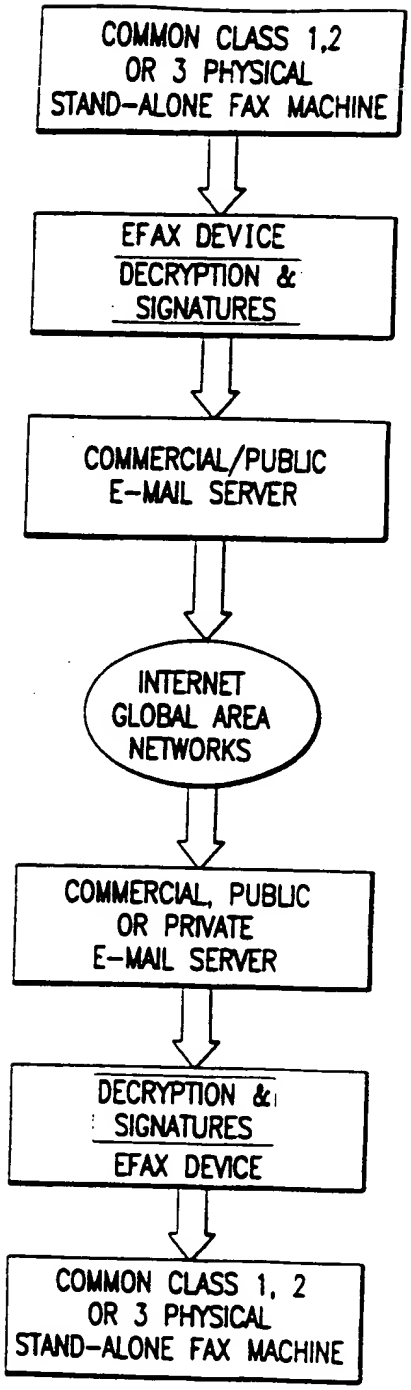

COMMON CLASS 1,2 OR 3 PHYSICAL STAND-ALONE FAX MACHINE
EFAX DEVICE
DECRYPTION & SIGNATURES
COMMERCIAL/PUBLIC E-MAIL SERVER
INTERNET GLOBAL AREA NETWORKS
COMMERCIAL, PUBLIC OR PRIVATE E-MAIL SERVER
DECRYPTION & SIGNATURES
EFAX DEVICE
COMMON CLASS 1, 2 OR 3 PHYSICAL STAND-ALONE FAX MACHINE

FIG. 6

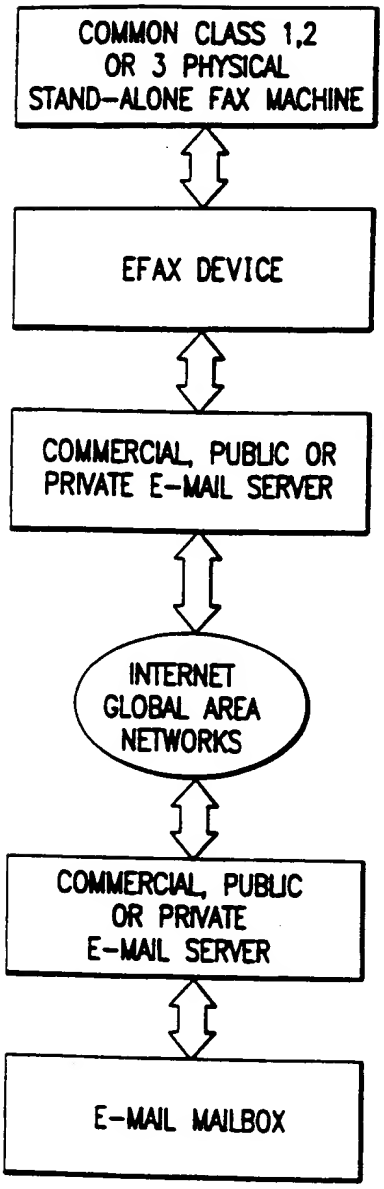

COMMON CLASS 1,2
OR 3 PHYSICAL
STAND-ALONE FAX MACHINE
EFAX DEVICE
COMMERCIAL, PUBLIC OR
PRIVATE E-MAIL SERVER
INTERNET
GLOBAL AREA
NETWORKS
COMMERCIAL, PUBLIC
OR PRIVATE
E-MAIL SERVER
E-MAIL MAILBOX

FIG. 7

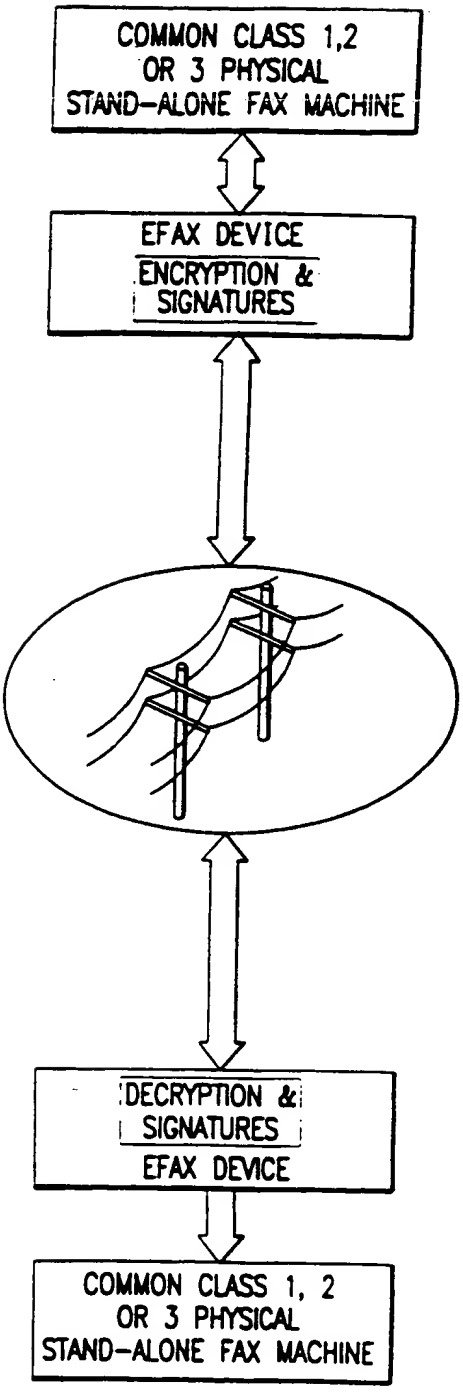

COMMON CLASS 1,2
OR 3 PHYSICAL
STAND-ALONE FAX MACHINE
EFAX DEVICE
ENCRYPTION &
SIGNATURES
DECRYPTION &
SIGNATURES
EFAX DEVICE
COMMON CLASS 1, 2
OR 3 PHYSICAL
STAND-ALONE FAX MACHINE

FIG. 8

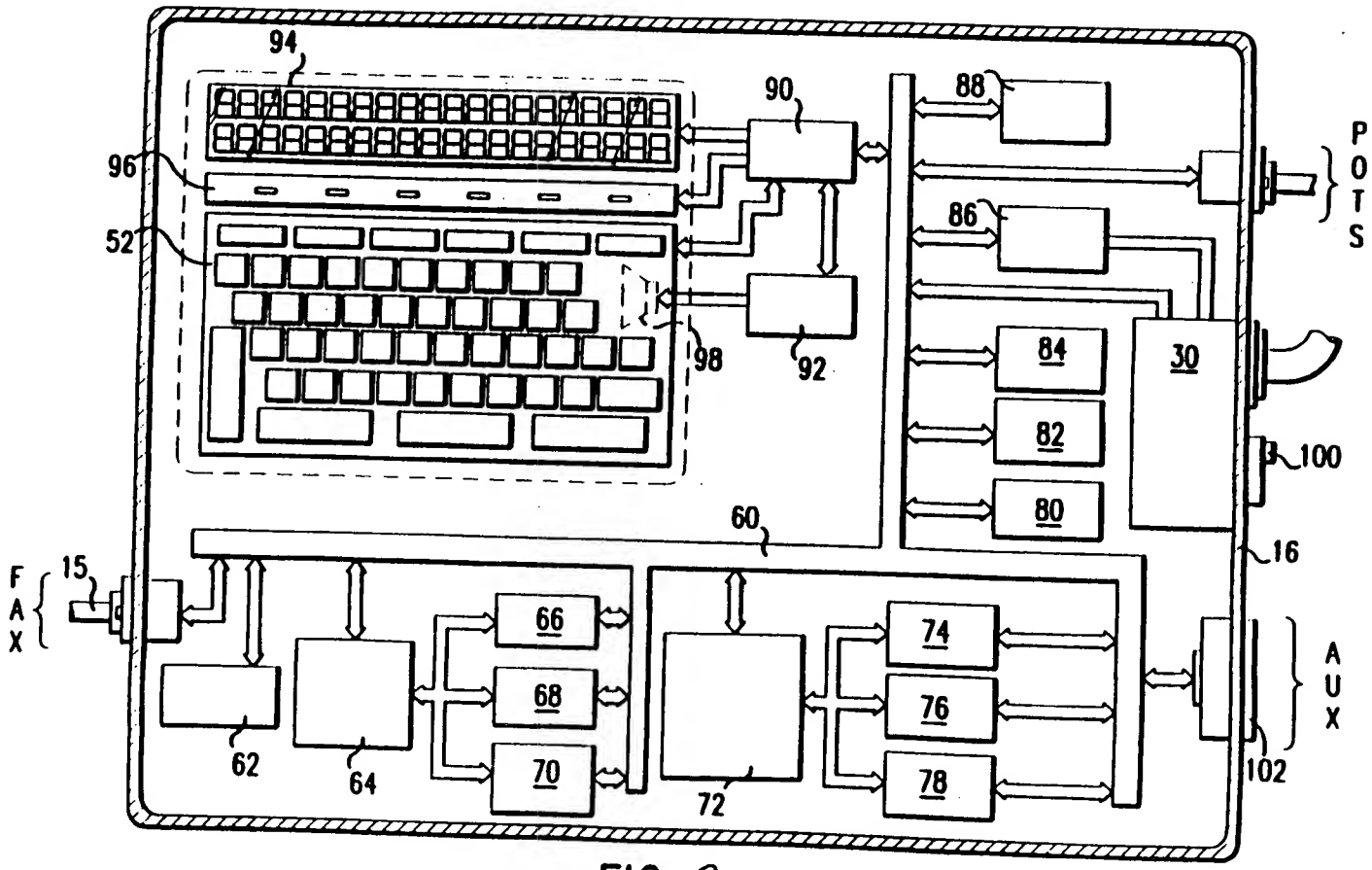


FIG. 9

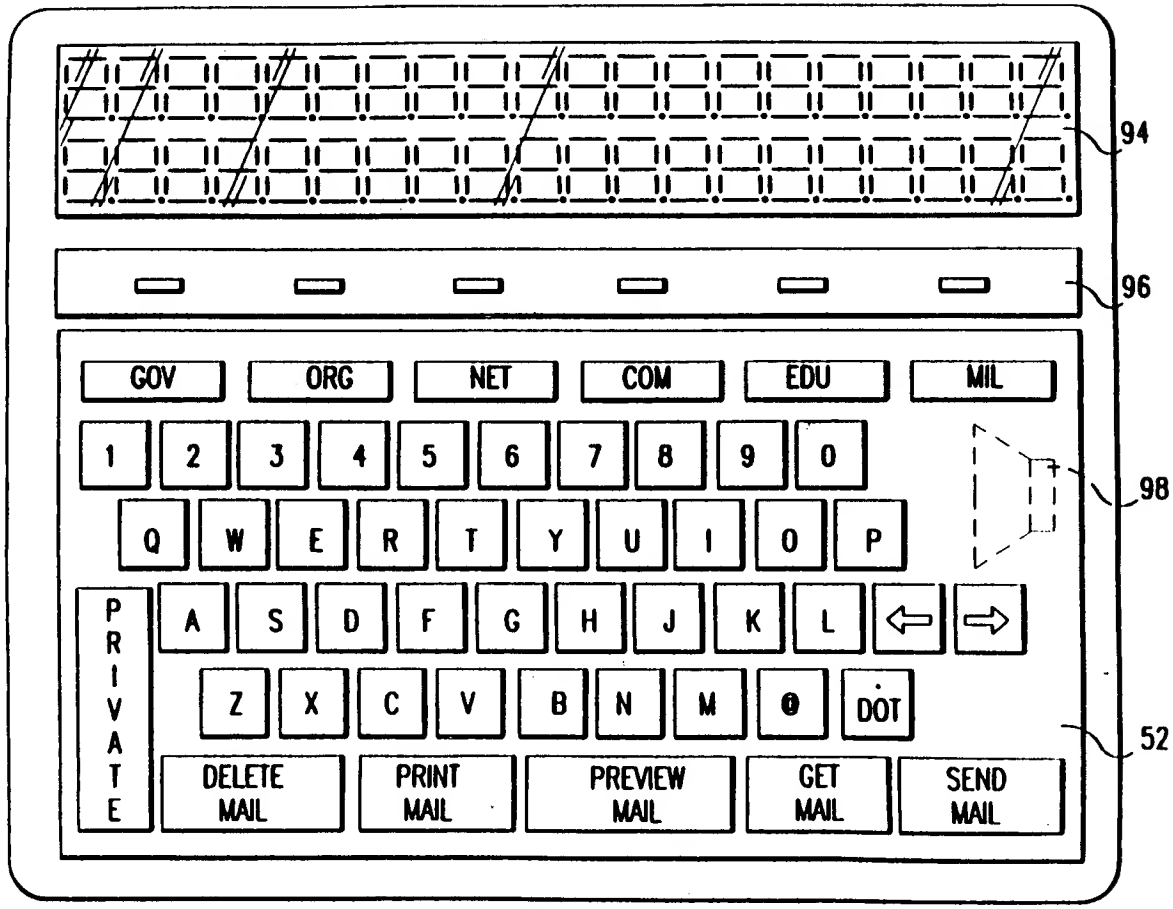

94
96
GOV
ORG
NET
COM
EDU
MIL
1
2
3
4
5
6
7
8
9
0
98
Q
W
E
R
T
Y
U
I
O
P
PRIVATE
A
S
D
F
G
H
J
K
L
Z
X
C
V
B
N
M
@
DOT
52
DELETE MAIL
PRINT MAIL
PREVIEW MAIL
GET MAIL
SEND MAIL

FIG. 10

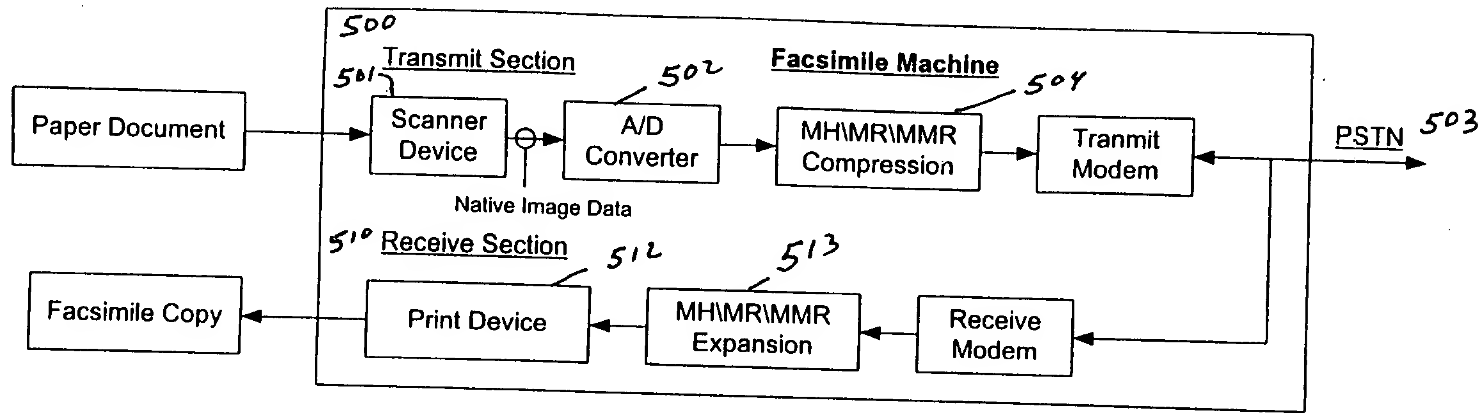

500
Transmit Section
Facsimile Machine
501
Paper Document
Scanner Device
502
A/D Converter
504
MH\MR\MMR Compression
Tranmit Modem
PSTN
503
Native Image Data
510
Receive Section
512
513
Facsimile Copy
Print Device
MH\MR\MMR Expansion
Receive Modem

Figure 11

Figure 12

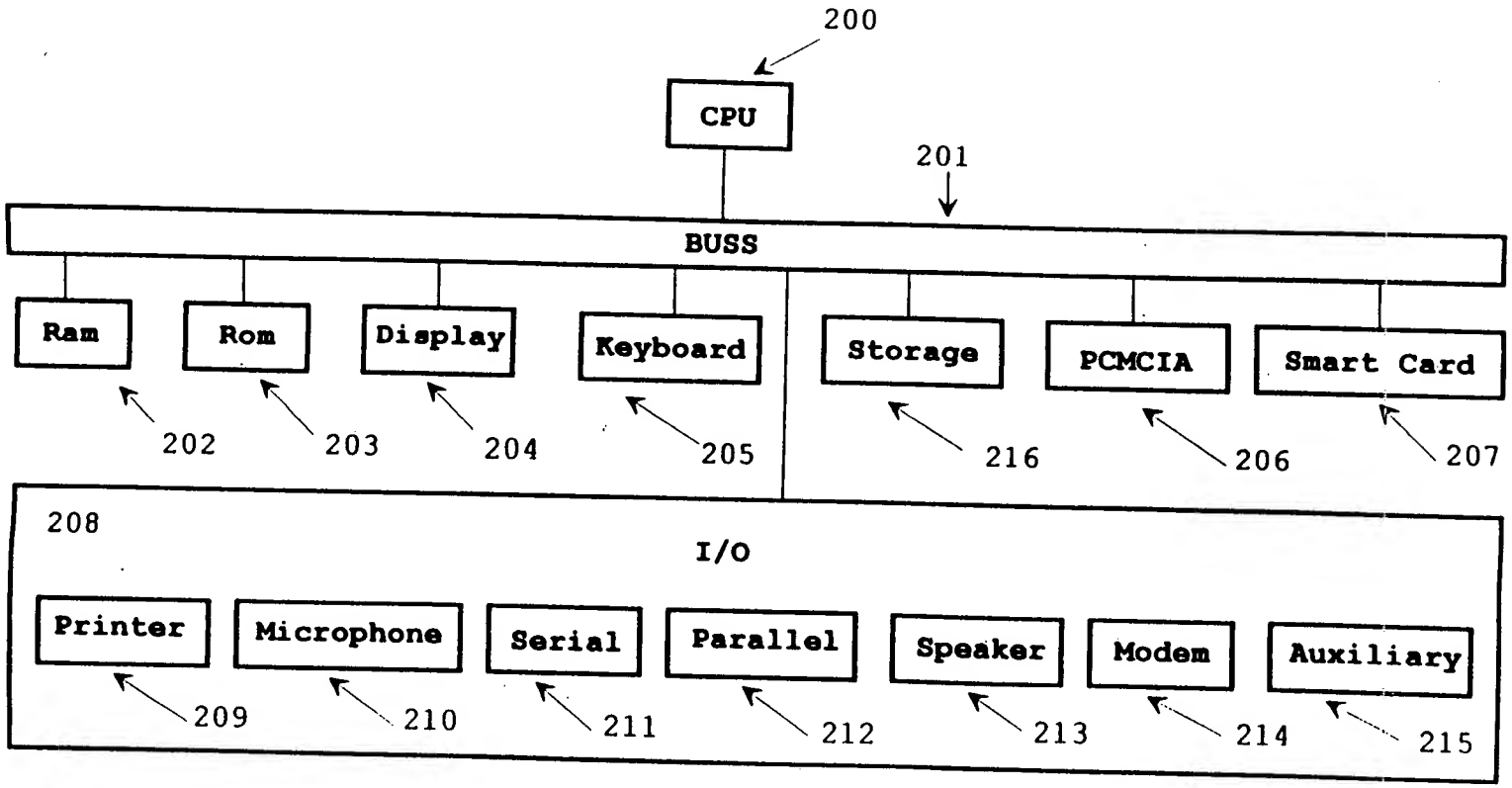

200
CPU
201
BUSS
Ram
Rom
Display
Keyboard
Storage
PCMCIA
Smart Card
202
203
204
205
216
206
207
208
I/O
Printer
Microphone
Serial
Parallel
Speaker
Modem
Auxiliary
209
210
211
212
213
214
215

Figure 13

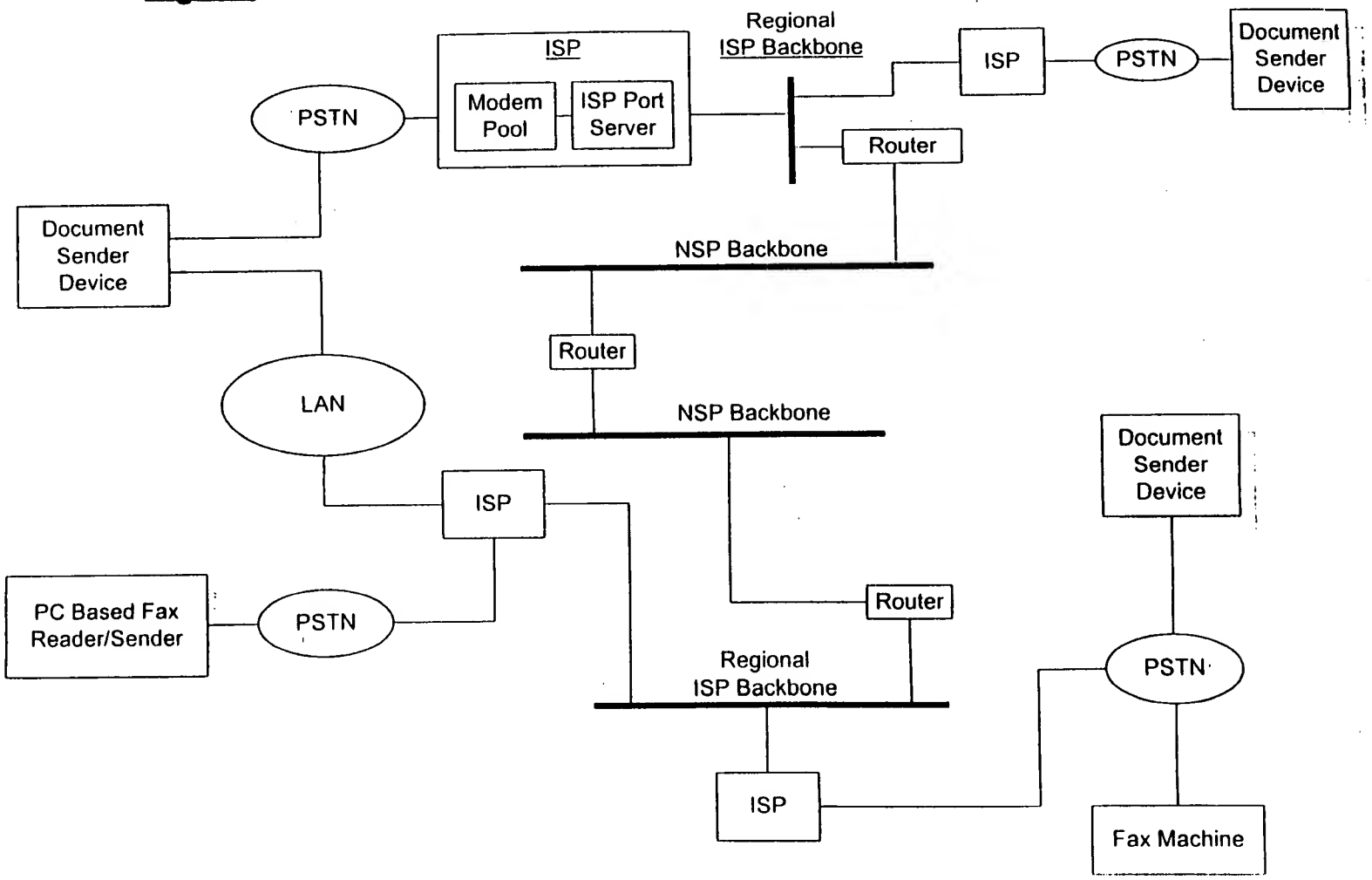


Figure 14

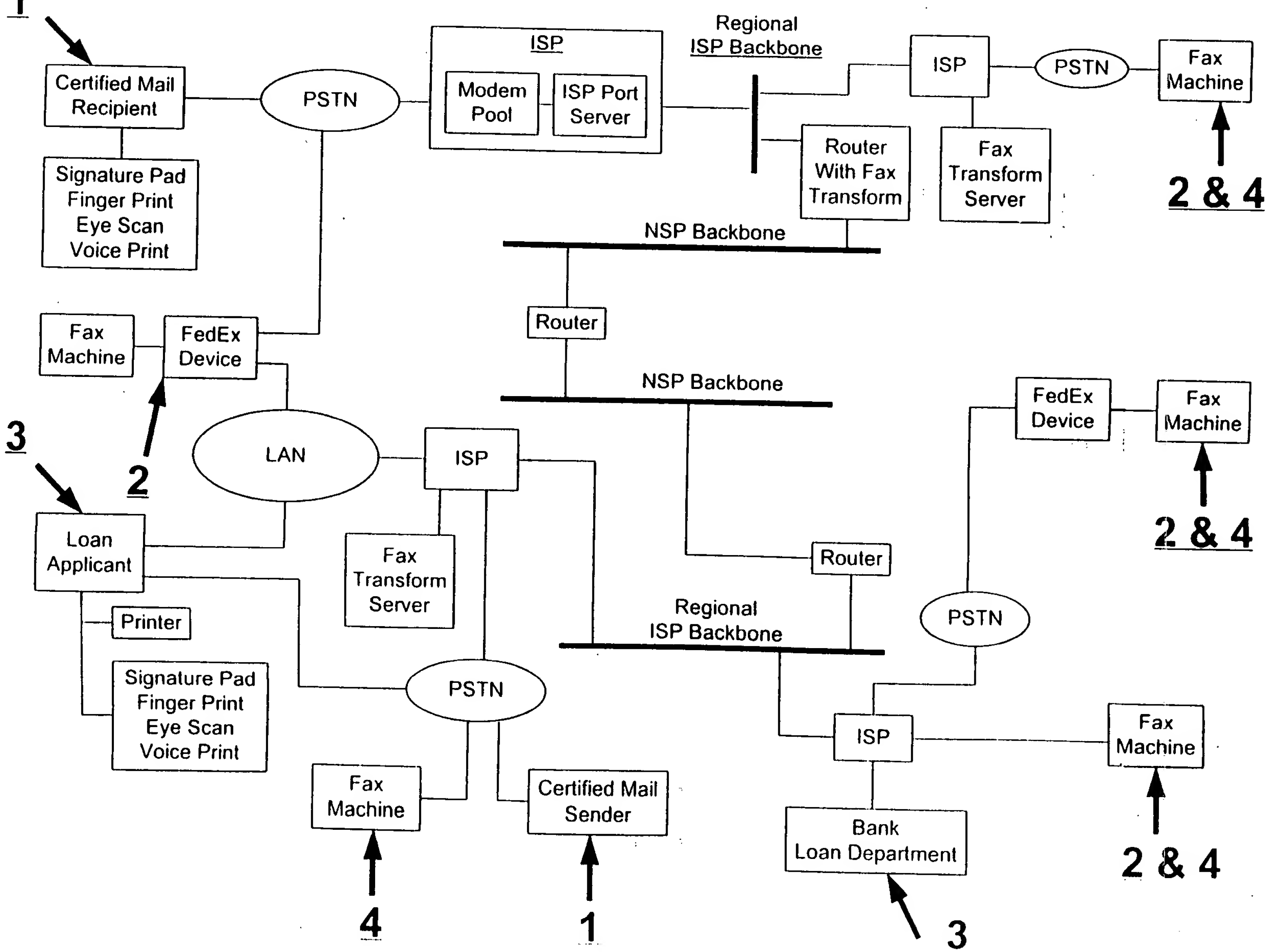

1
Certified Mail Recipient
Signature Pad
Finger Print
Eye Scan
Voice Print
PSTN
ISP
Modem Pool
ISP Port Server
Regional
ISP Backbone
ISP
PSTN
Fax Machine
Router With Fax Transform
Fax Transform Server
2 & 4
NSP Backbone
Router
NSP Backbone
Fax Machine
FedEx Device
2
3
LAN
ISP
Loan Applicant
Printer
Signature Pad
Finger Print
Eye Scan
Voice Print
Fax Transform Server
PSTN
Fax Machine
4
Certified Mail Sender
1
FedEx Device
Fax Machine
2 & 4
Router
Regional
ISP Backbone
PSTN
ISP
Bank
Loan Department
3
Fax Machine
2 & 4

Figure 15

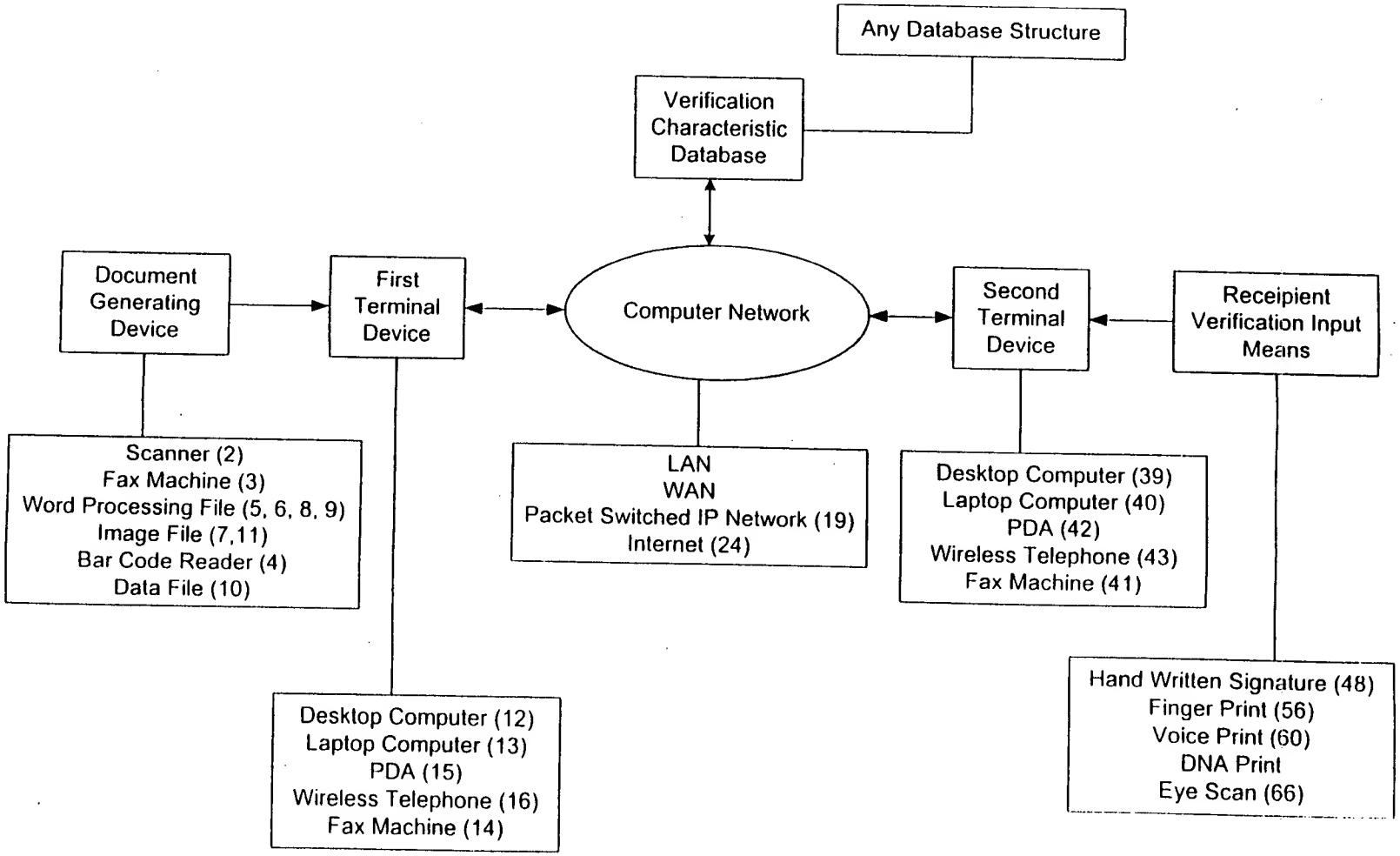
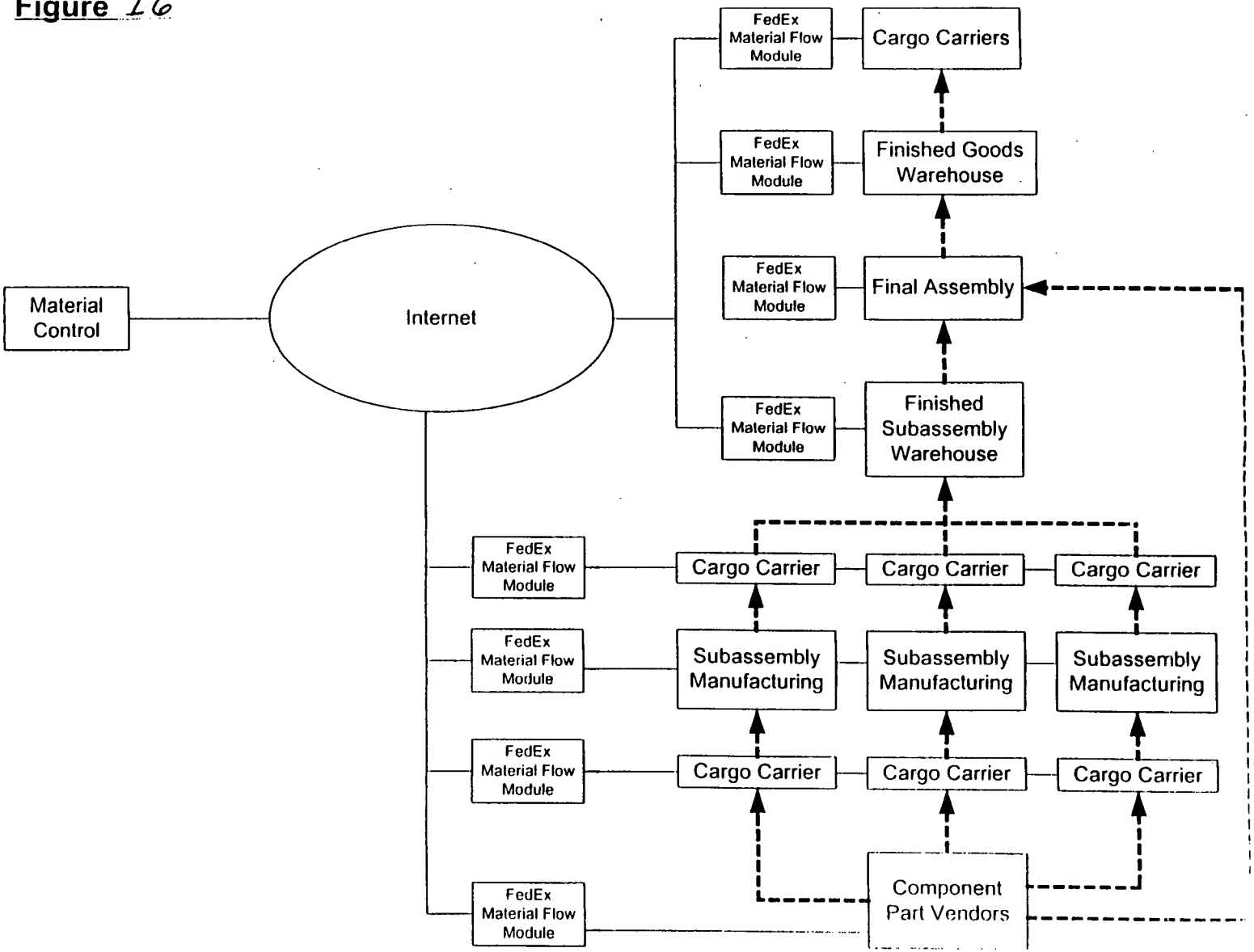


Figure 16


Material Control
Internet
FedEx Material Flow Module
Cargo Carriers
Finished Goods Warehouse
Final Assembly
Finished Subassembly Warehouse
Cargo Carrier
Subassembly Manufacturing
Component Part Vendors

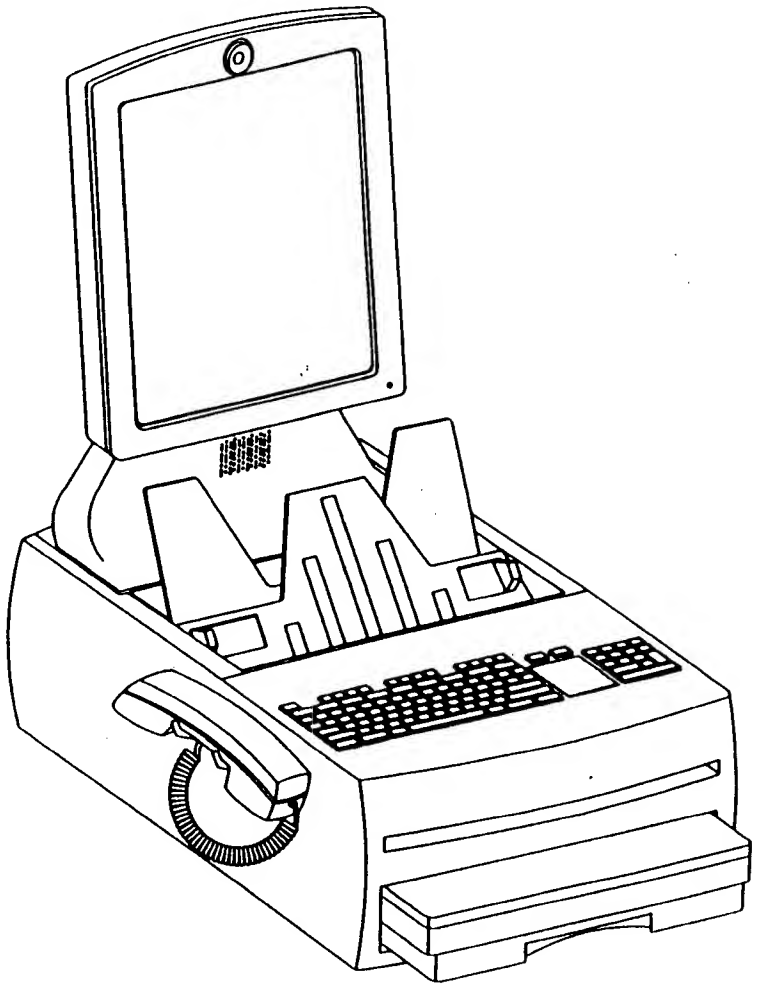


Figure 17

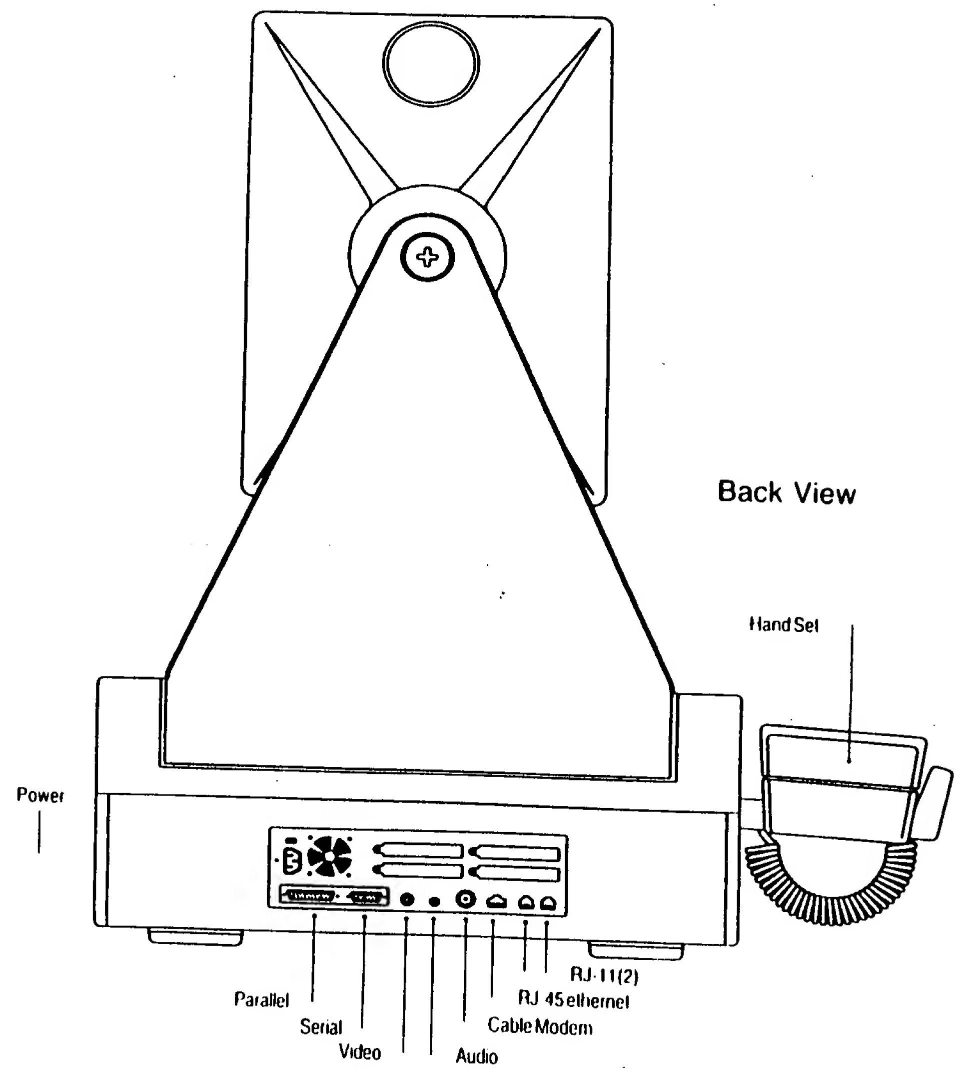


Figure 18

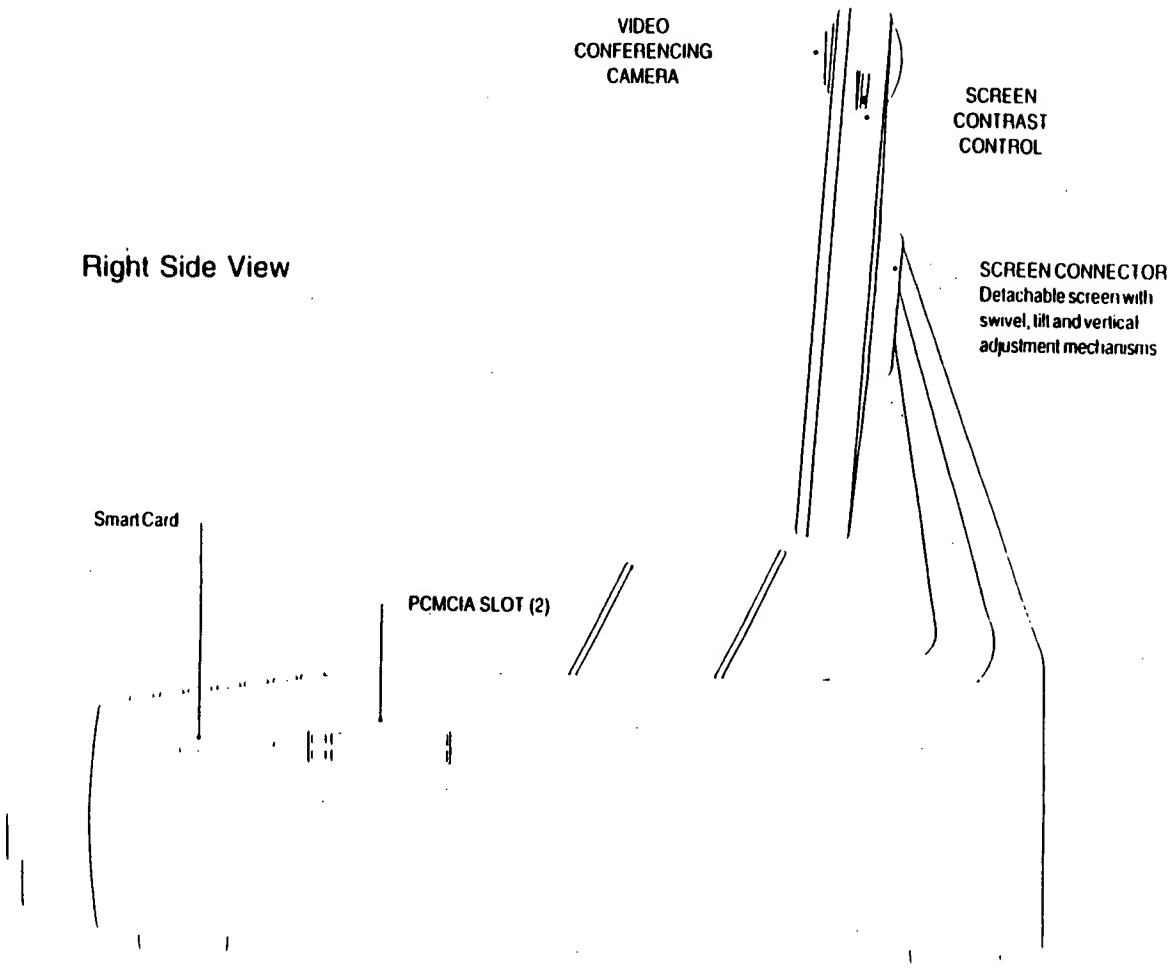


Figure 19

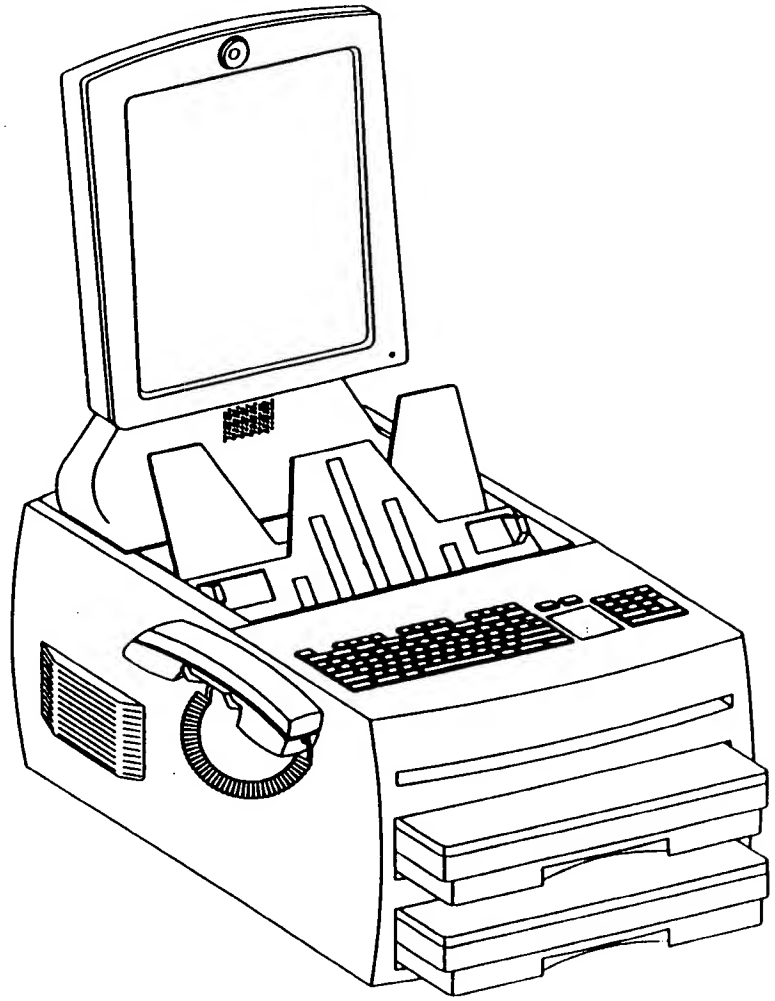


Figure 20

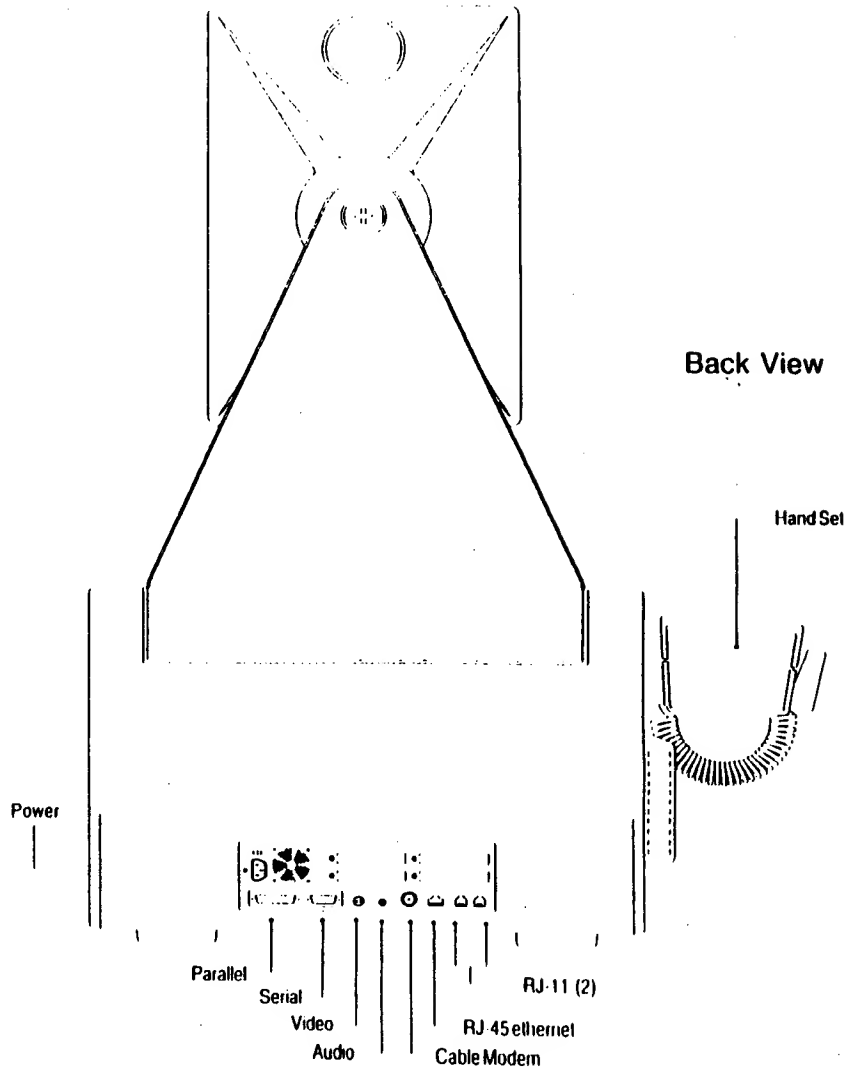

Back View
Hand Set
Power
Parallel
Serial
Video
Audio
Cable Modem
RJ-45 ethernet
RJ-11 (2)

Figure 21

e-Concierge'.MFD
Hardware Ports

Right Side View

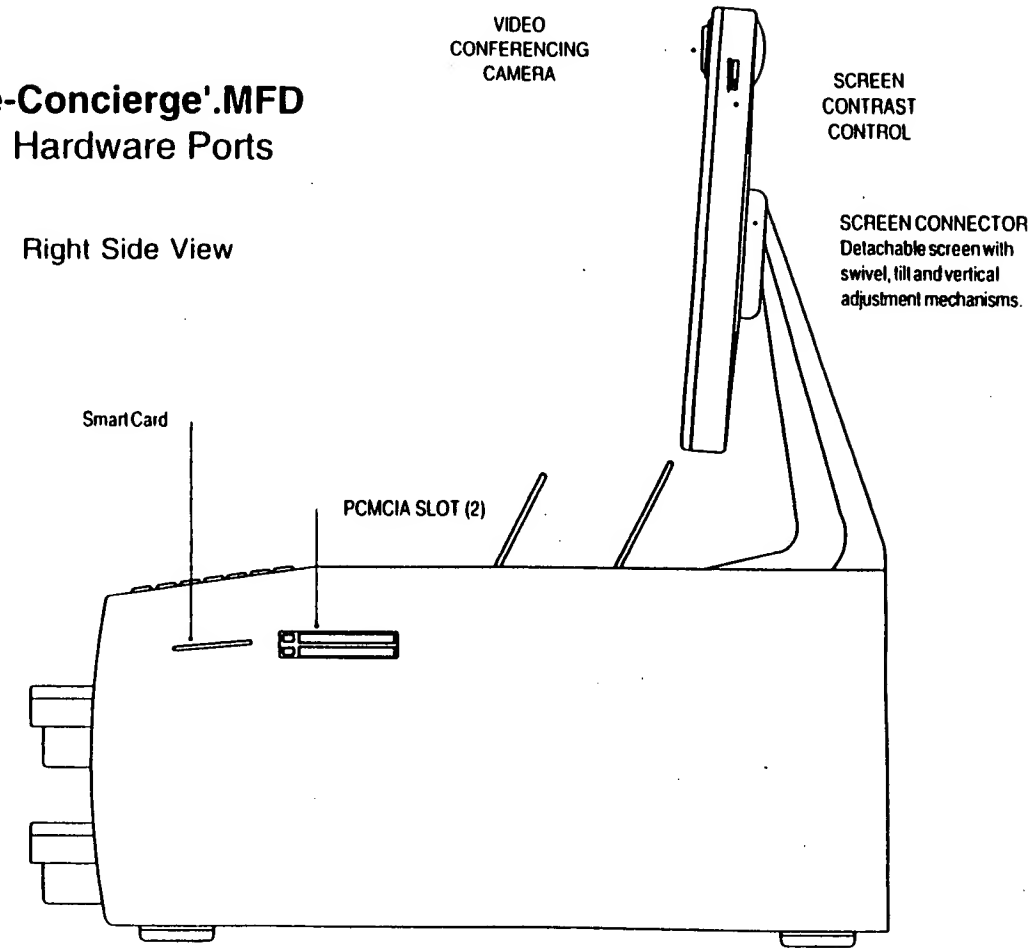


Figure 22

Figure 23

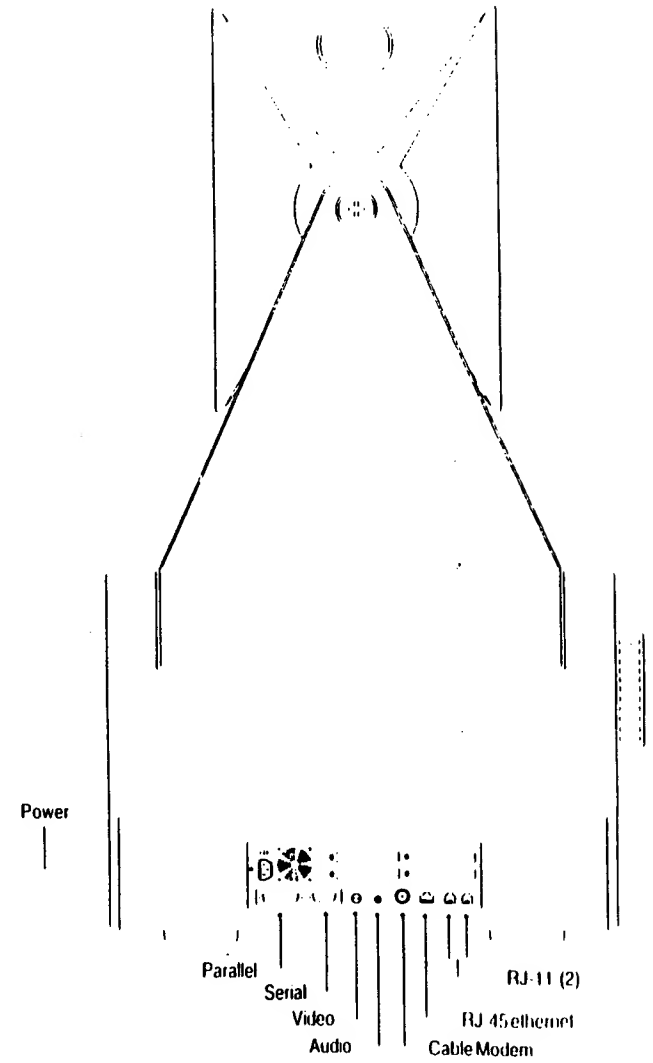

Back View
Power
Parallel
Serial
Video
Audio
RJ-11 (2)
RJ 45 ethernet
Cable Modem

Figure 24

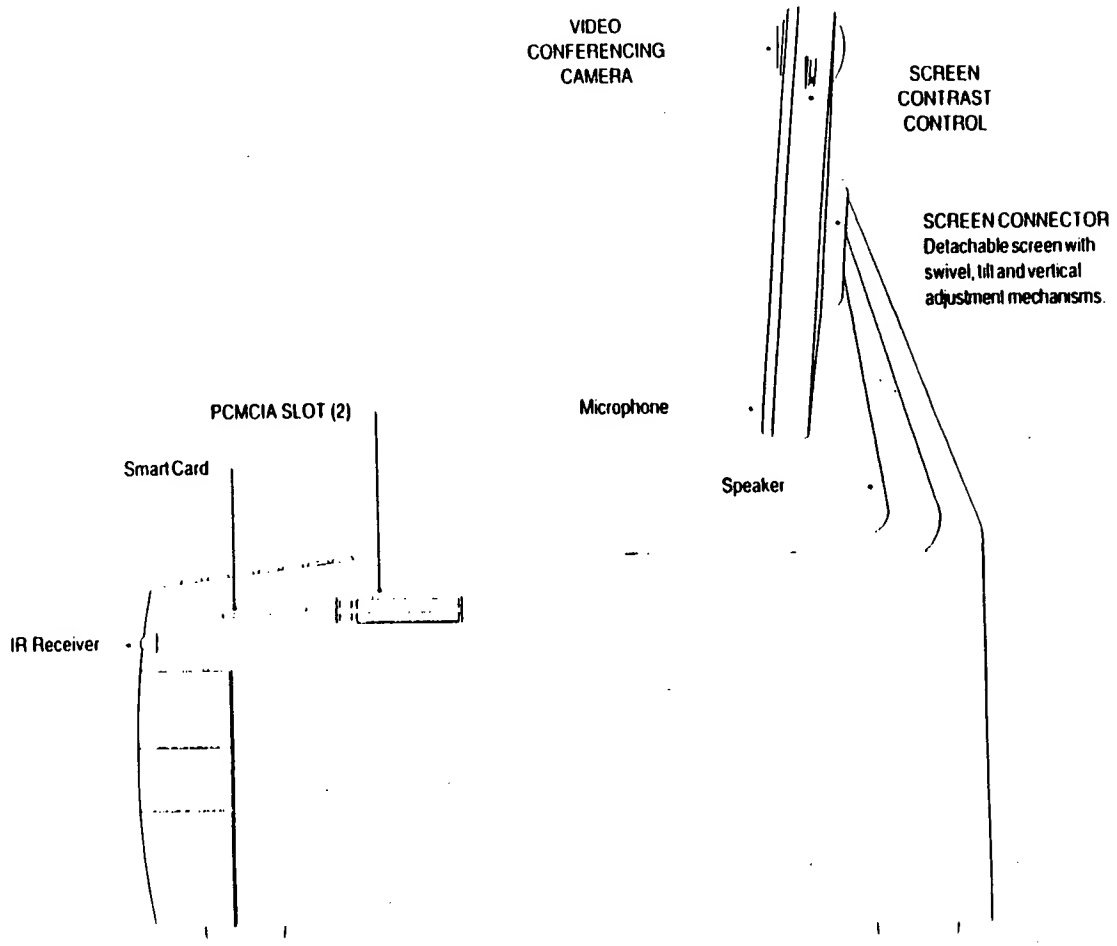


Figure 25

Figure 26

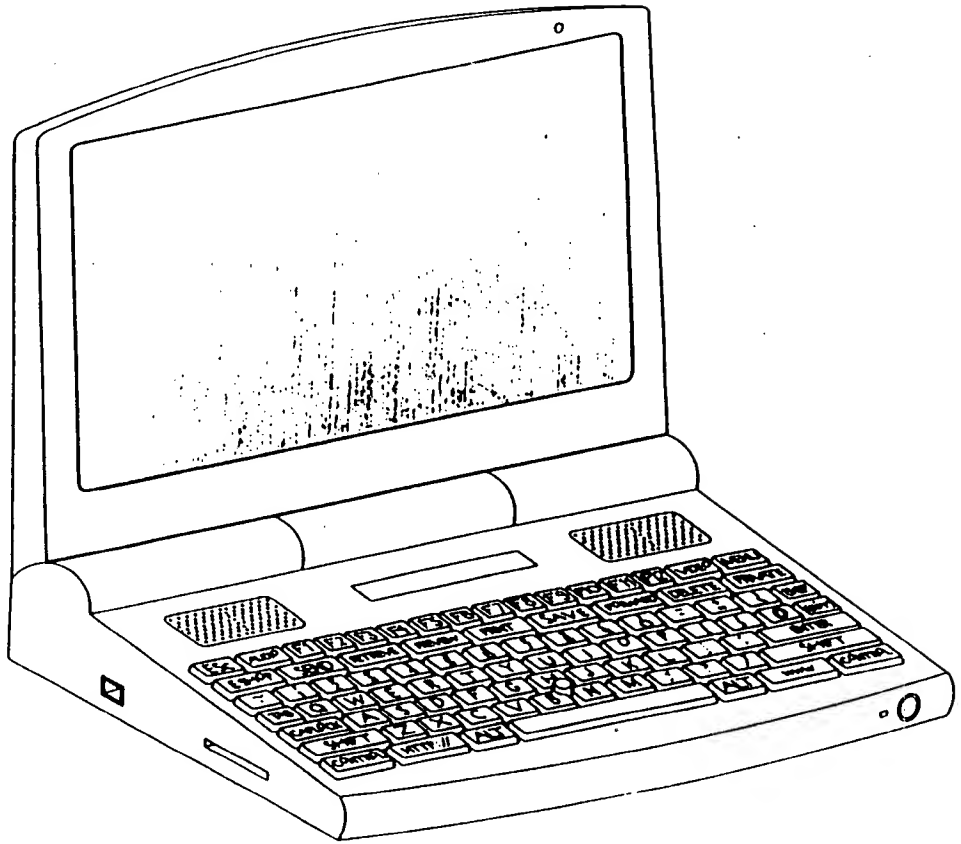


Figure 27

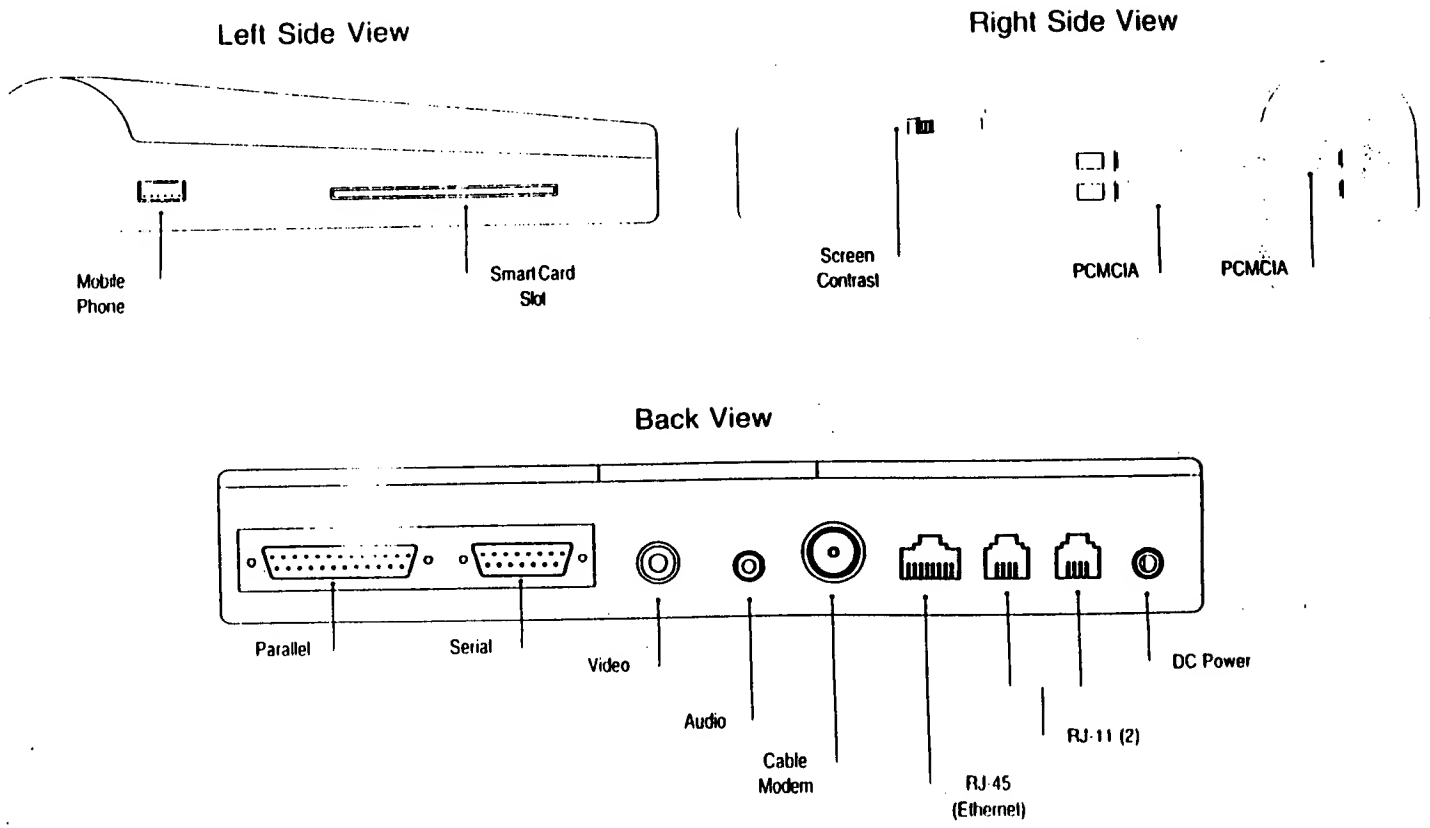

Left Side View
Right Side View
Mobile Phone
Smart Card Slot
Screen Contrast
PCMCIA
PCMCIA
Back View
Parallel
Serial
Video
Audio
Cable Modem
RJ-45 (Ethernet)
RJ-11 (2)
DC Power

Figure 28

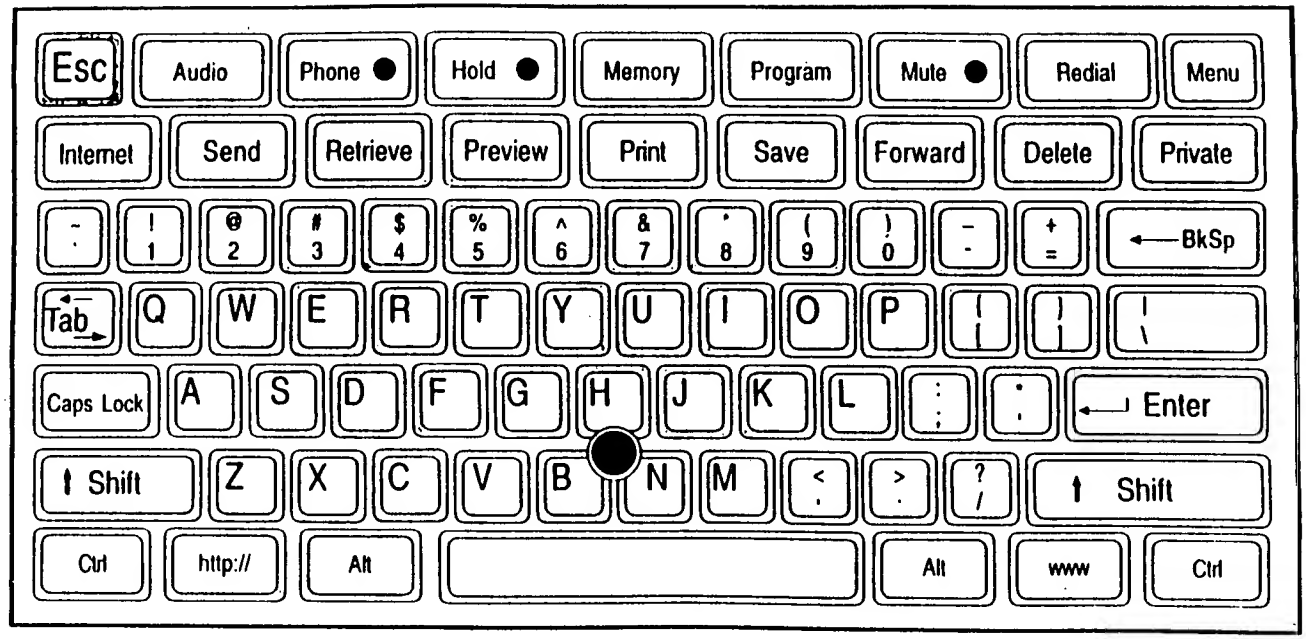

Esc
Audio
Phone
Hold
Memory
Program
Mute
Redial
Menu
Internet
Send
Retrieve
Preview
Print
Save
Forward
Delete
Private
BkSp
Tab
Caps Lock
Enter
Shift
Shift
Ctrl
http://
Alt
Alt
www
Ctrl

Figure 29

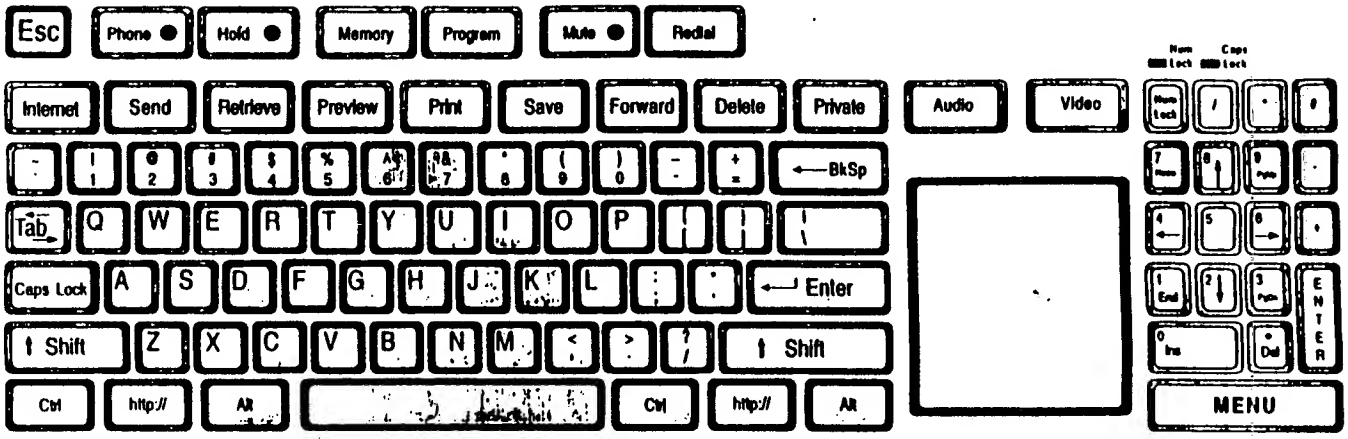

Esc
Phone
Hold
Memory
Program
Mute
Redial
Internet
Send
Retrieve
Preview
Print
Save
Forward
Delete
Private
Audio
Video
BkSp
Tab
Caps Lock
Enter
Shift
Shift
Ctrl
http://
Alt
Ctrl
http://
Alt
MENU

Figure 30

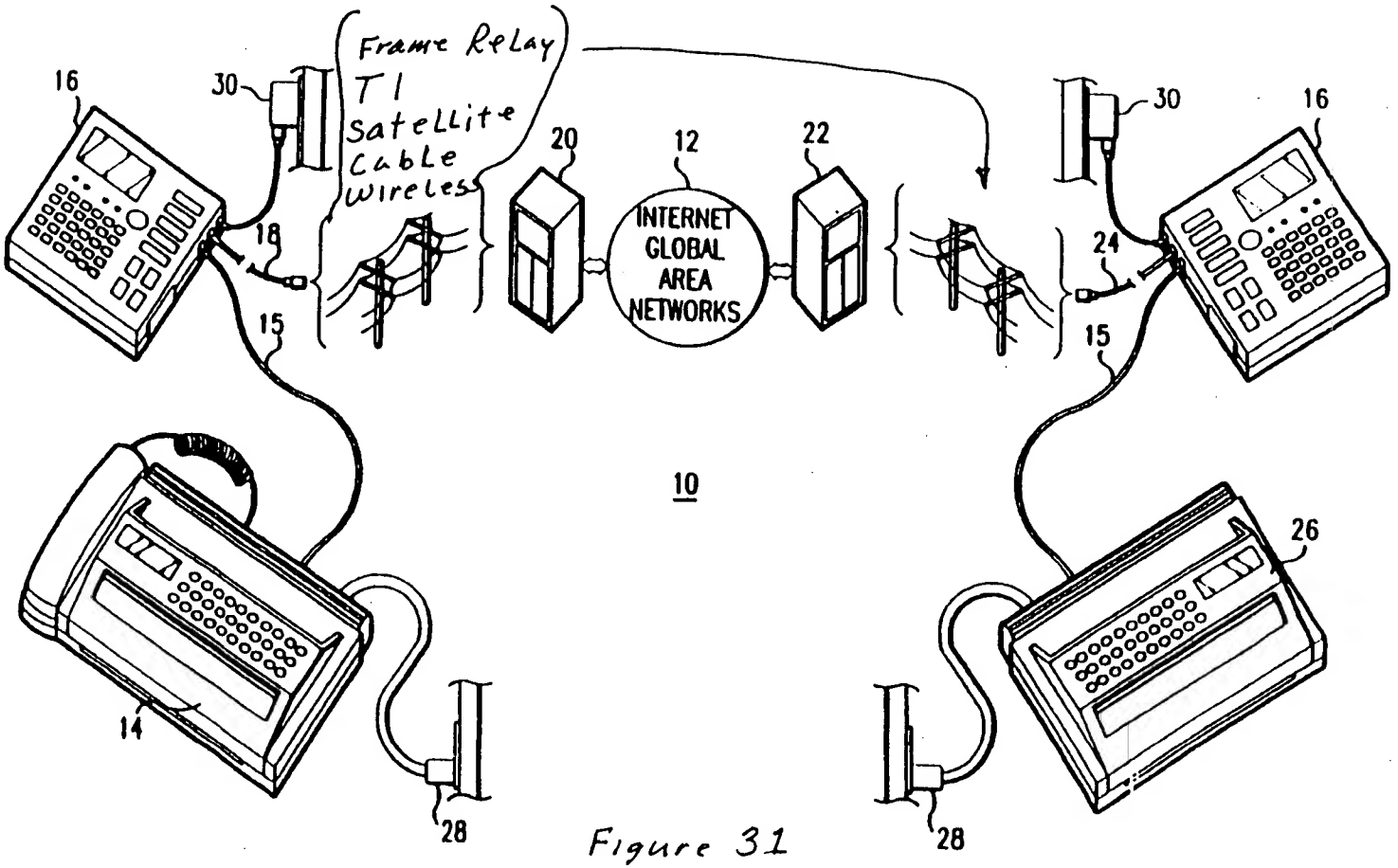


Figure 31

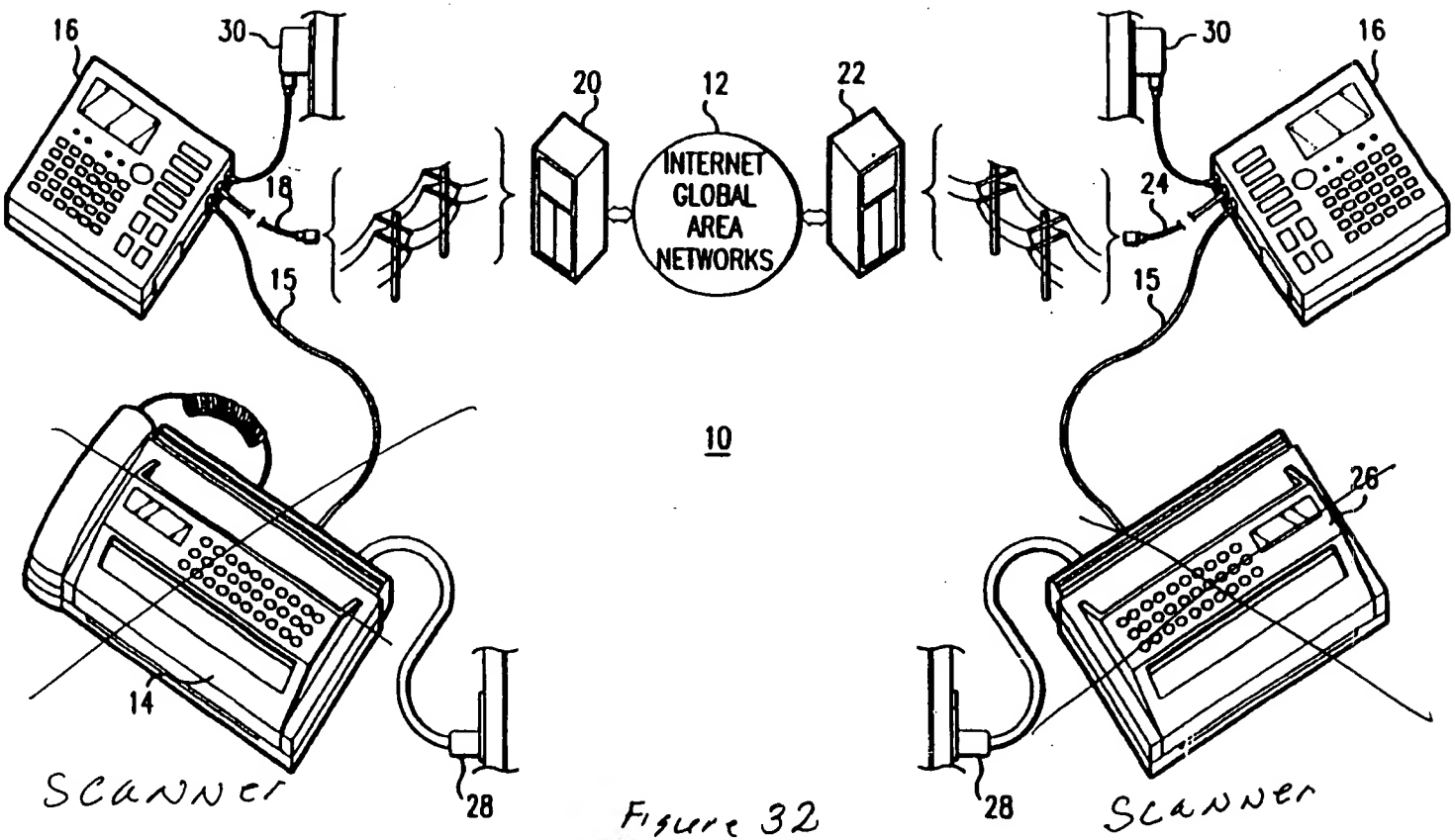


Figure 32

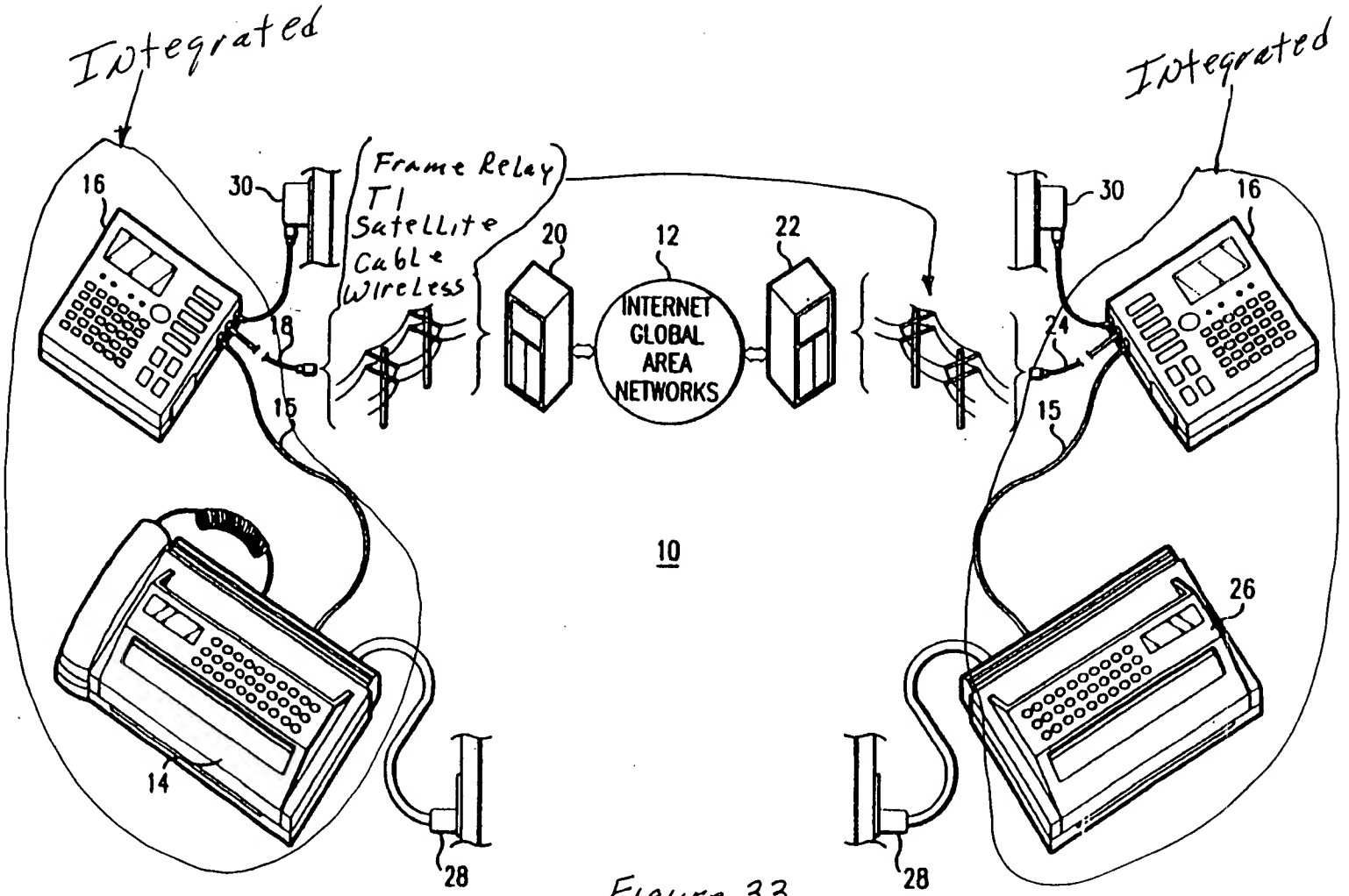


Figure 33

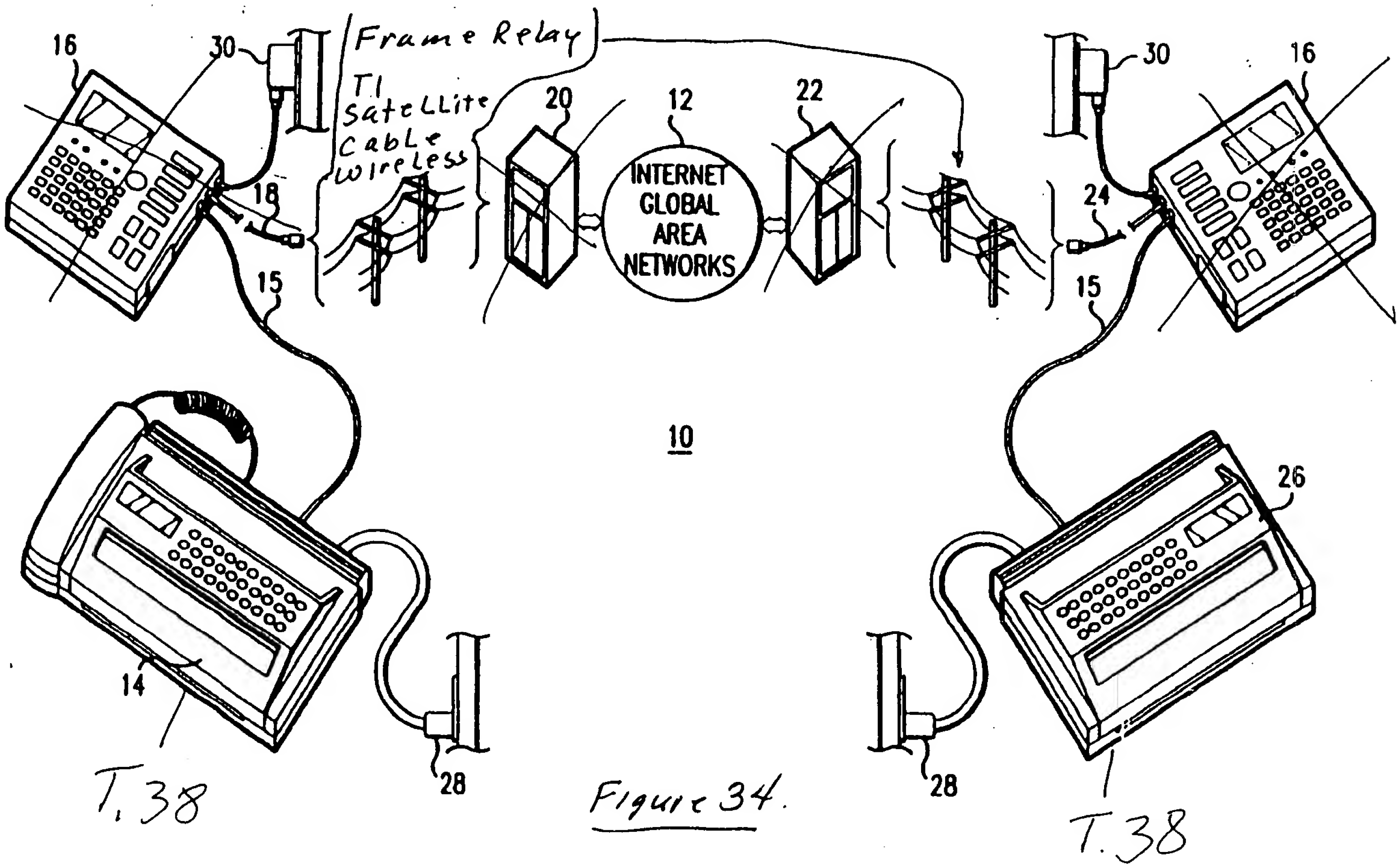

Frame Relay
T1
SateLLite
Cable
Wireless
INTERNET GLOBAL AREA NETWORKS
16
30
18
15
20
12
22
24
10
14
26
28
T.38
T.38

Figure 34.

Figure 35

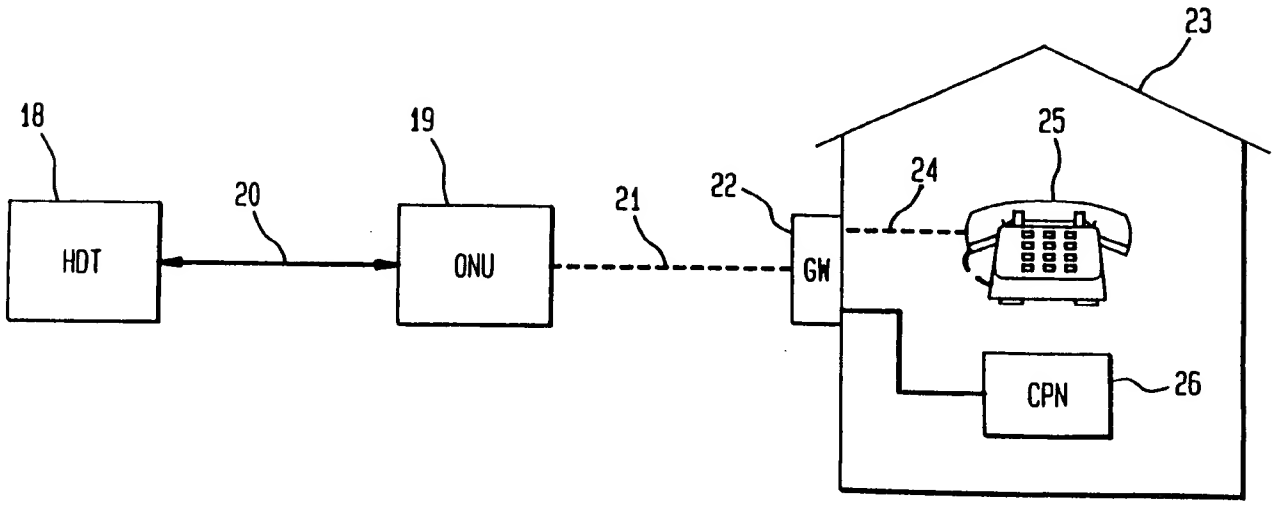


Figure 36

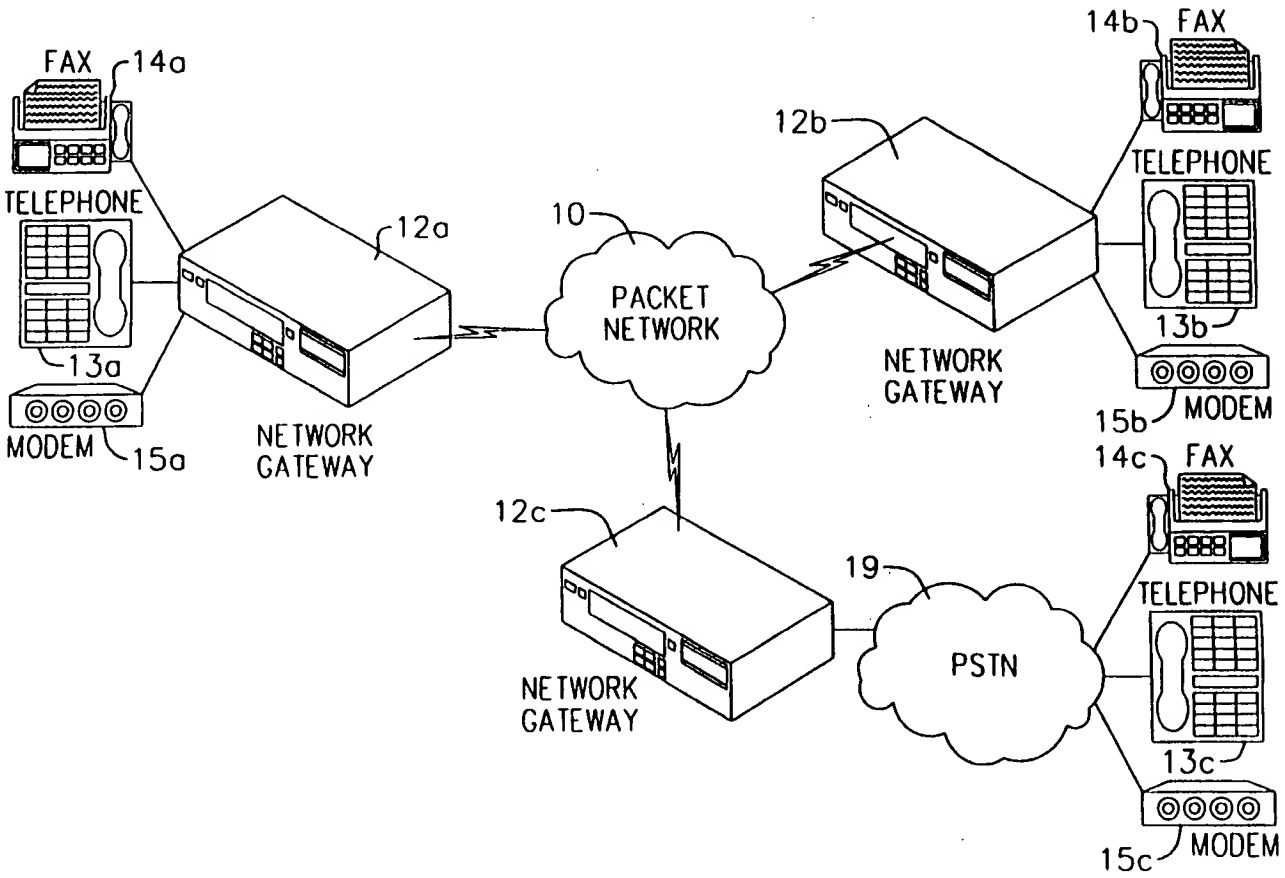

FAX
14a
TELEPHONE
13a
MODEM
15a
12a
NETWORK
GATEWAY
10
PACKET
NETWORK
12b
NETWORK
GATEWAY
14b
FAX
TELEPHONE
13b
15b
MODEM
12c
NETWORK
GATEWAY
19
PSTN
14c
FAX
TELEPHONE
13c
15c
MODEM

Figure 37

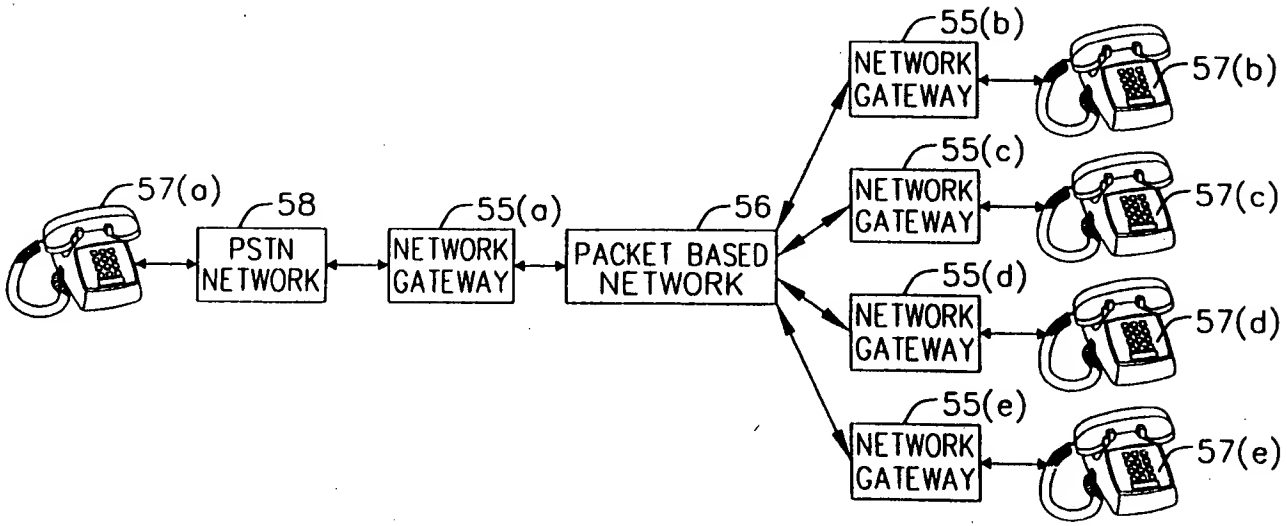

57(a)
58
PSTN NETWORK
55(a)
NETWORK GATEWAY
56
PACKET BASED NETWORK
55(b)
NETWORK GATEWAY
57(b)
55(c)
NETWORK GATEWAY
57(c)
55(d)
NETWORK GATEWAY
57(d)
55(e)
NETWORK GATEWAY
57(e)

Figure 38

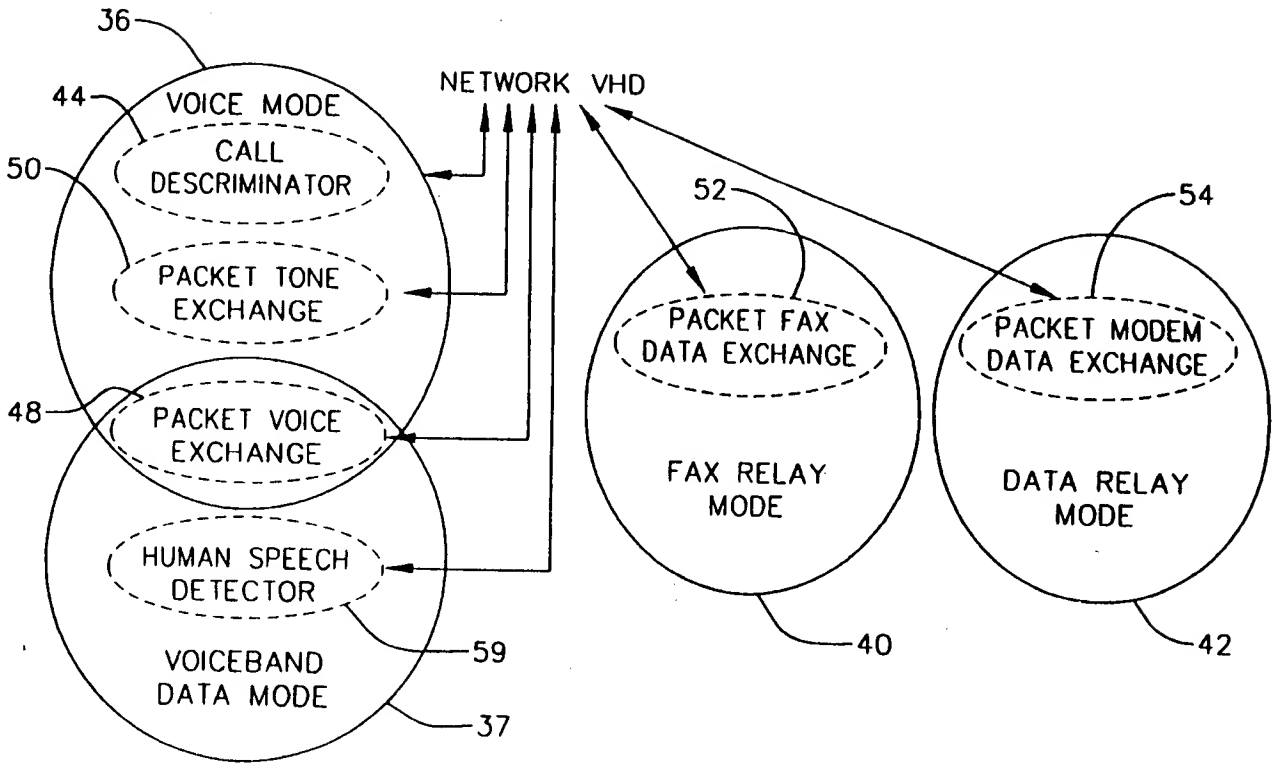
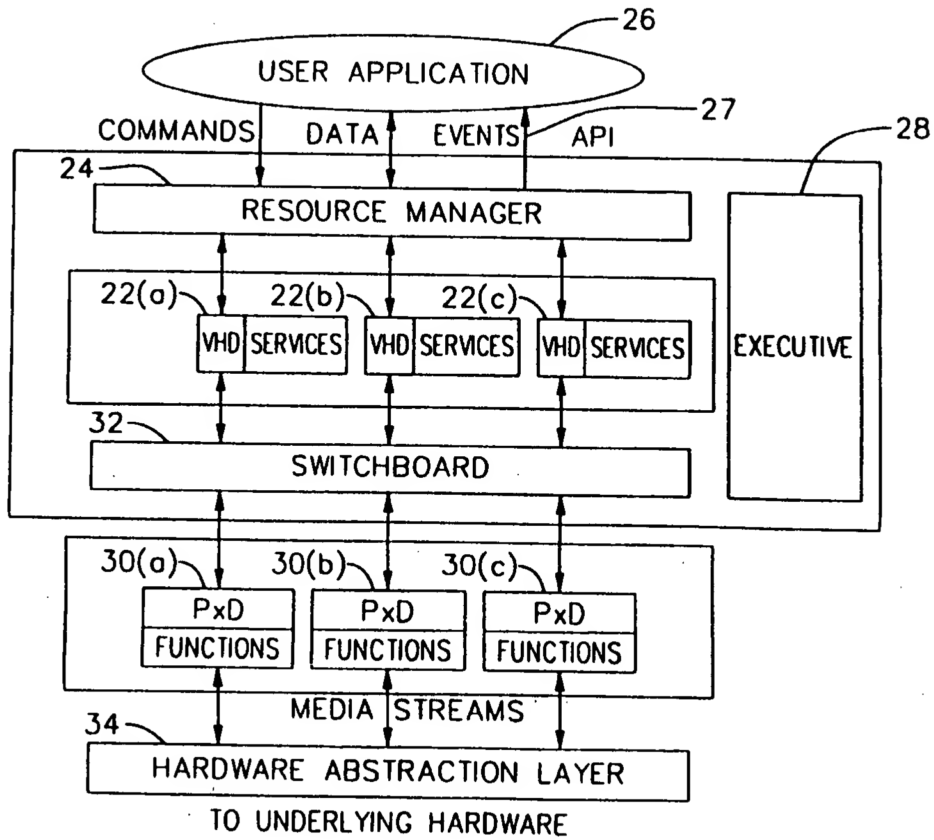
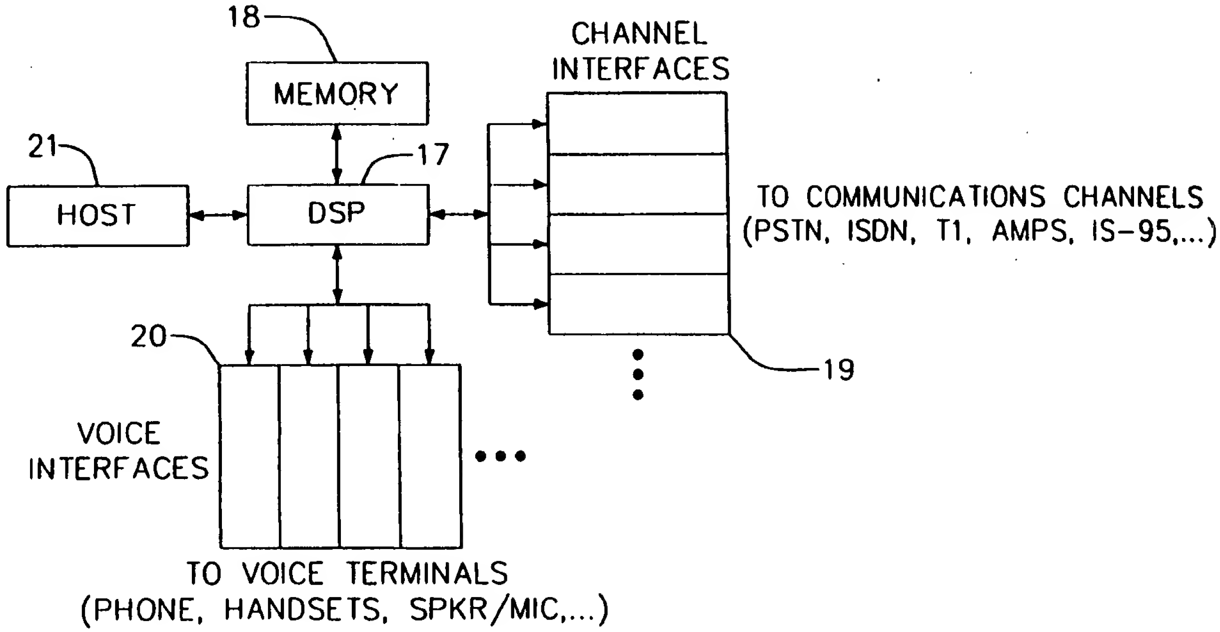


Figure 39



26
USER APPLICATION
COMMANDS
DATA
EVENTS
API
27
28
24
RESOURCE MANAGER
22(a)
22(b)
22(c)
VHD
SERVICES
VHD
SERVICES
VHD
SERVICES
EXECUTIVE
32
SWITCHBOARD
30(a)
30(b)
30(c)
PxD
FUNCTIONS
PxD
FUNCTIONS
PxD
FUNCTIONS
MEDIA STREAMS
34
HARDWARE ABSTRACTION LAYER
TO UNDERLYING HARDWARE

Figure 40



18
MEMORY
21
HOST
DSP
17
CHANNEL
INTERFACES
TO COMMUNICATIONS CHANNELS
(PSTN, ISDN, T1, AMPS, IS-95,...)
19
20
VOICE
INTERFACES
TO VOICE TERMINALS
(PHONE, HANDSETS, SPKR/MIC,...)

Figure 41

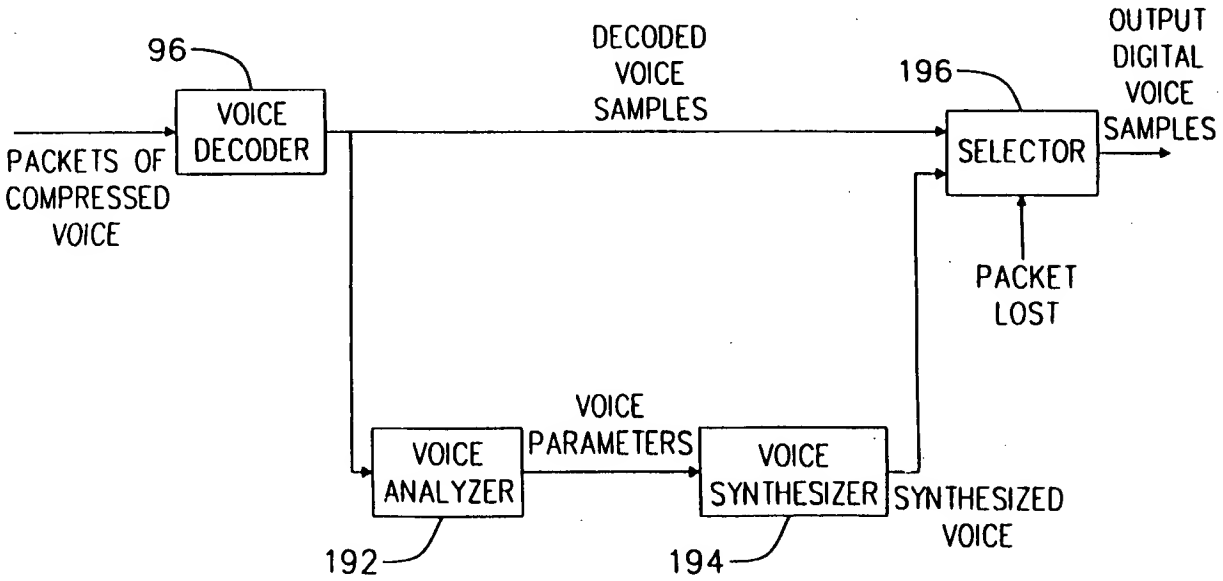


Figure 42

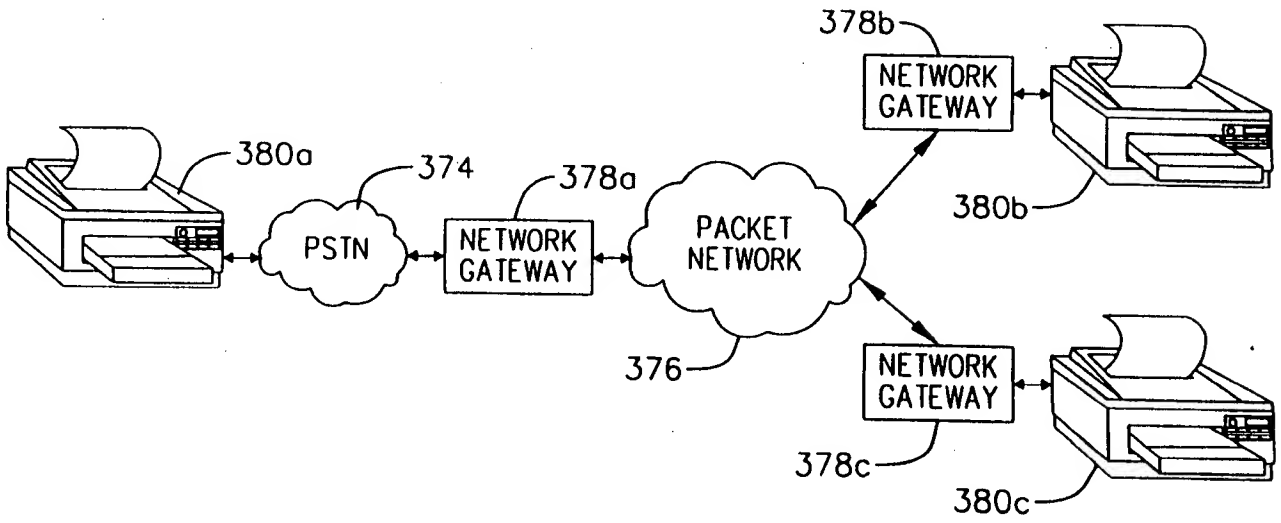
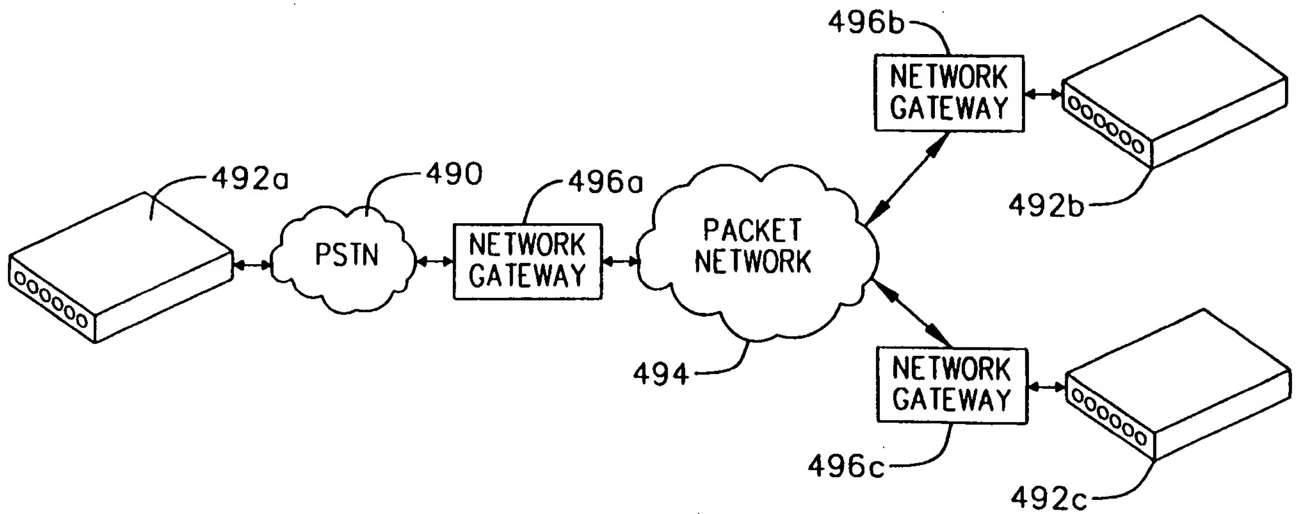


Figure 43



492a
490
PSTN
496a
NETWORK GATEWAY
PACKET NETWORK
494
496b
NETWORK GATEWAY
492b
NETWORK GATEWAY
496c
492c

Figure 44

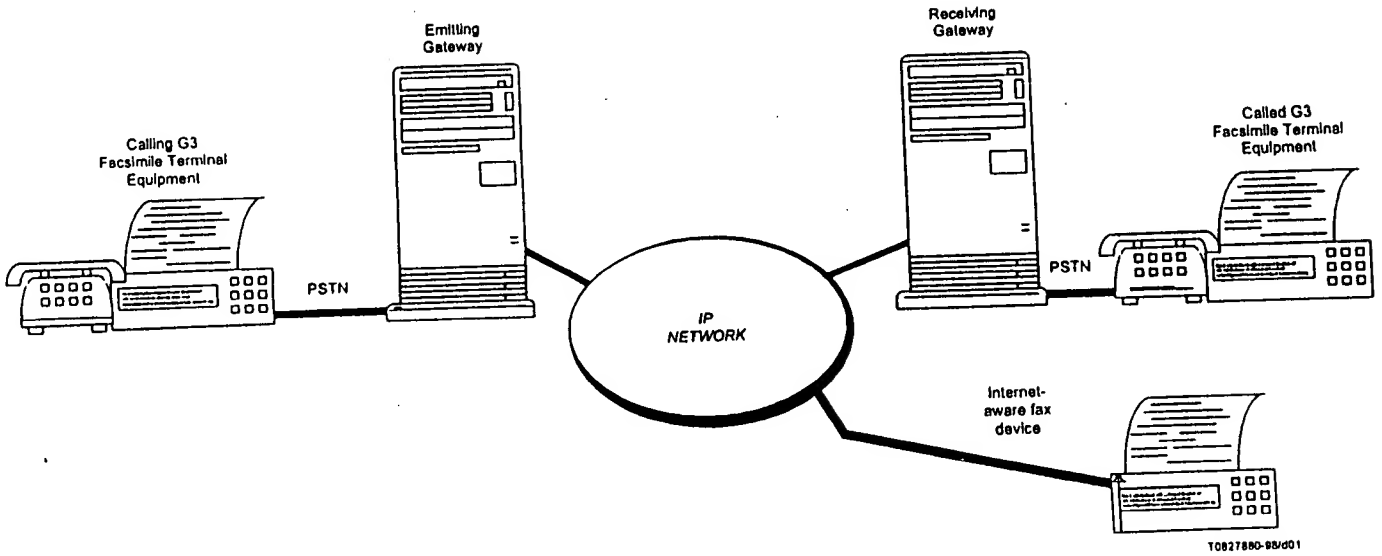
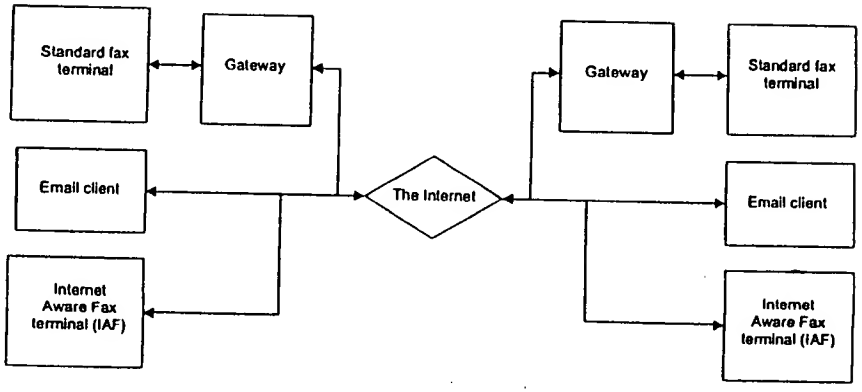

Emitting
Gateway
Receiving
Gateway
Calling G3
Facsimile Terminal
Equipment
Called G3
Facsimile Terminal
Equipment
PSTN
PSTN
IP
NETWORK
Internet-
aware fax
device
T0827880-98/d01

Figure 45



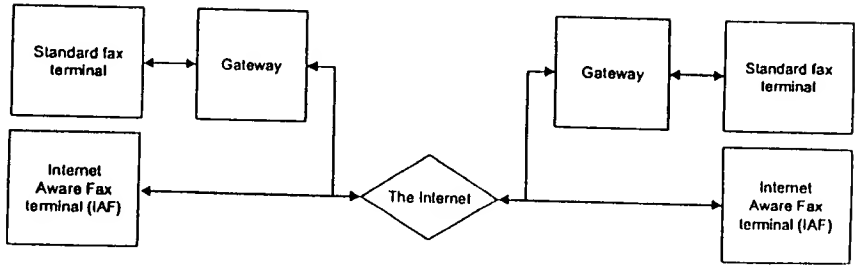
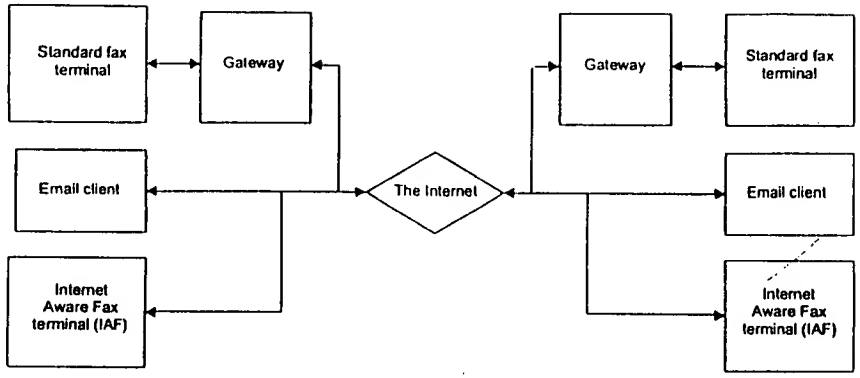


Figure 46


Standard fax terminal
Gateway
Email client
Internet Aware Fax terminal (IAF)
The Internet
Gateway
Standard fax terminal
Email client
Internet Aware Fax terminal (IAF)

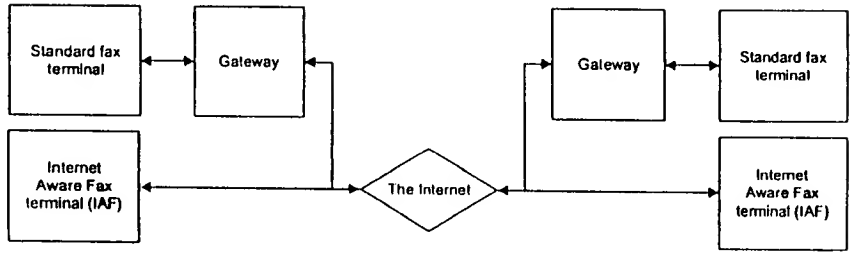
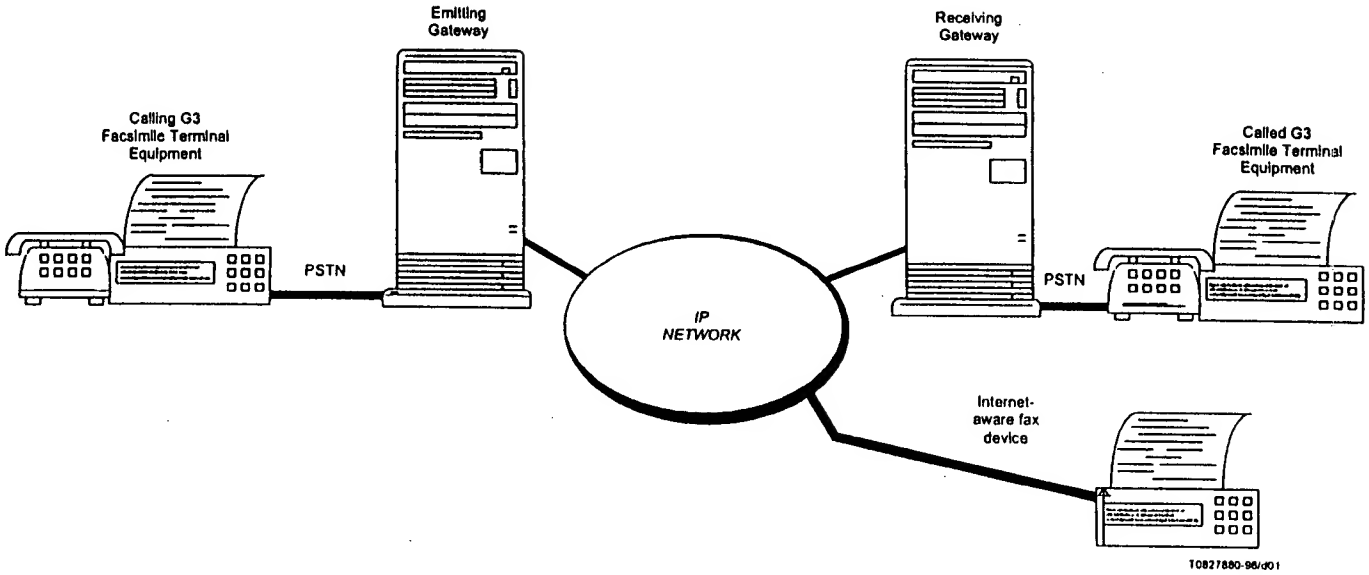

Standard fax terminal
Gateway
Internet Aware Fax terminal (IAF)
The Internet
Gateway
Standard fax terminal
Internet Aware Fax terminal (IAF)

Figure 47


Emitting
Gateway
Receiving
Gateway
Calling G3
Facsimile Terminal
Equipment
Called G3
Facsimile Terminal
Equipment
PSTN
PSTN
IP
NETWORK
Internet-
aware fax
device
T0827880-96/d01